

3215 PORTER DRIVE
PALO ALTO, CA

STATE OF CALIFORNIA
HEALTH AND WELFARE AGENCY
DEPARTMENT OF HEALTH SERVICES
TOXIC SUBSTANCES CONTROL DIVISION

In the Matter of:) Docket #HSA 88/89-024
3215 Hillview Avenue)
Palo Alto, CA) REMEDIAL ACTION ORDER
AKA: Hewlett-Packard) Health and Safety Code
Building #15) Sections 25355.5(a)(1)(B)
205, 206, 25358.3(a)(1)

To: Hewlett-Packard Company, a California Corporation; and
Leland Stanford, Jr. University, a California Corporation.

I. INTRODUCTION

1.1. Parties. The State Department of Health Services
(Department) issues this Remedial Action Order (Order) to the
following parties (Respondents):

1.1.1. Hewlett-Packard Company, a California Corporation
with offices at 1501-T Page Mill Road, Palo Alto, California
94304.

1.1.2. Leland Stanford Jr. University, a California
Corporation, Lands Management, 857 Serra Street, Stanford,
California 94305-6225.

1.2. Site. The Site which is the subject of this Order is
located at 3215 Hillview Avenue, Palo Alto, California. A map
of the Site is attached as Exhibit 1.

1.3. Jurisdiction. Section 25355.5(a)(1)(B) of the Health
and Safety Code authorizes the Department to issue an Order
establishing a schedule for removing or remedying a release of a
hazardous substance at a site, or for correcting the conditions
that threaten the release of a hazardous substance. The Order

1 includes, but is not limited to, requiring specific dates by
2 which the nature and extent of a release shall be determined and
3 the Site adequately characterized, a remedial action plan
4 prepared and submitted to the Department for approval, and a
5 removal or remedial action completed.

6 1.3.1. Health and Safety Code Sections 205 and 206
7 authorize the Department to take action necessary to abate
8 nuisances.

9 1.3.2. Health and Safety Code 25358.3(a) authorizes the
10 Department to take specified action when it determines that
11 there may be an imminent or substantial endangerment.

12 1.4. Exhibits. All Exhibits attached to this Order are
13 incorporated herein by this reference.

14 II. FINDINGS AND DETERMINATIONS

15 2.1 Hewlett Packard, 1501-T Page Mill Road, Palo Alto,
16 California, 94304 and Stanford University, 857 Serra Street,
17 Stanford, California 94305-6225, are the responsible parties as
18 defined by Health and Safety Code Sections 25319, 25323.5, 25360
19 and 25385.1(g).

20 2.2. Stanford University is the owner of the property
21 known as the Stanford Research Park on which the facility is
22 located.

23 2.3. Since 1965, Hewlett-Packard has leased the Site from
24 Stanford University.

25 2.4. The Site is located within the Hillview Porter Site
26 area as described in the "Expenditure Plan for the Hazardous
27 Substance Cleanup Bond Act of 1984" (January 1989).

1 2.5. The Hillview Porter site is a regional groundwater
2 contamination problem located in and around the Stanford
3 Research Park.

4 2.6. Hewlett-Packard manufactured electronic transformers
5 and printed circuit boards at the Site from 1965 to December
6 1987.

7 2.7. The Department has determined that there are releases
8 and/or threatened releases of hazardous substances at or from
9 the Site to soil, surface water and/or groundwater. The
10 substances found at the Site are "hazardous substances" as
11 defined by Health and Safety Code Section 25316 and the past,
12 present or potential migration of these hazardous substances
13 from the Site into the soil, surface water and/or groundwater
14 constitutes an actual or threatened "release" as defined in
15 Health and Safety Code Section 25320.

16 2.8. During the years of the plant operation, the facility
17 consisted of a large building used for manufacturing (Building
18 #15), a waste treatment facility, and a chemical storage bunker
19 (Exhibit 2).

20 2.9. Building #15 was divided into three use areas, based
21 upon facility operations (Exhibit 3). The southwestern one-
22 third of the building was used for metal plating and was the
23 area in which the largest quantities of acids, metals and
24 solvents were used. In the wet floor plating process, printed
25 circuit board parts were manually submersed in acid holding
26 tanks and were plated with metals such as nickel. The central
27 portion of the building was used for transformer manufacturing.

1 Solvents were used in this process but there is no evidence of
2 use of polychlorinated biphenols (PCBs). The northeastern
3 one-third of the building was used primarily for cable
4 manufacturing. Relatively inert materials were used for this
5 process; chemicals were generally not used.

6 2.10. A solvent waste pit, four shallow acid pits, a
7 chemical dilution pit, trichloroethylene and methylene chloride
8 stills, and a gold recovery system, all located within Building
9 #15, were used to manage wastes prior to 1975. In 1975, the
10 waste treatment facility was built. Chemical wastes from
11 process areas in Building #15 were conveyed to the waste
12 treatment facility by piping contained in a concrete lined
13 trench. The treated waste stream was discharged to the sanitary
14 sewer in compliance with discharge permits issued by the City of
15 Palo Alto.

16 2.11. A chemical storage bunker was installed in 1974 on a
17 hillside approximately 200 feet north of Building #15 (Exhibit
18 2).

19 2.12. The chemical storage bunker was used as a bulk
20 storage area for chemicals used for operations at the facility.
21 Chemicals were conveyed via pipelines to Building #15.

22 2.13. Four tanks within the bunker stored 1,1,1-trichloro-
23 ethane, methylene chloride, sulfuric acid, and alkaline etch.

24 2.14. The manufacturing plant ceased operations in
25 December 1987, and the building is currently undergoing
26 renovation.

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1 2.15. Technical reports submitted to the Department
2 indicate chemicals found in soils and groundwater beneath and
3 downgradient of the facility have been used onsite and that
4 chemical spills have occurred onsite in the past. Investiga-
5 tions by Hewlett-Packard have determined that Site soils are
6 contaminated and may be contributing in part to contaminated
7 groundwater beneath and downgradient of the property.

8 2.16. Technical reports and chemical use reports submitted
9 to the Department reveal that Hewlett-Packard has used
10 trichloroethylene (TCE), tetrachloroethylene (PCE), trichloro-
11 ethane (TCA), and other solvents in processes onsite (Exhibit 4
12 - excerpted from "Hewlett-Packard Building #15 Initial Site
13 Characterization Report" November 1987).

14 SAMPLING RESULTS

15 2.17. In December 1985, Stanford University sampled water
16 from seven private wells in the Barron Park neighborhood
17 downgradient from the Hillview-Porter plume area.

18 TCE was detected in one well at a concentration of 9.5 ppb,
19 which is in excess of the Department's 5.0 ppb Action Level for
20 TCE in drinking water (Exhibit 5).

21 2.18. Hewlett-Packard initiated an investigation of soil
22 and groundwater at the Site in July 1987 and conducted a review
23 of records to identify potential sources of contamination.

24 2.19. Three phases of the investigation have been
25 performed to date. The Phase I investigation included the
26 drilling of twenty soil borings and four monitoring wells on the
27 Site.

1 2.20. TCE, dichloromethane (DCM), TCA, and styrene were
2 detected in soils at maximum concentrations of 25,000 ppb, 2,700
3 ppb, 4,800 ppb, and 800 ppb, respectively (Exhibit 6).

4 2.21. TCE, 1,1-DCE, and chloroform were detected in
5 groundwater at concentrations as high as 900 ppb, 22 ppb, and
6 6.4 ppb, respectively (Exhibit 7).

7 2.22. In December 1987, Hewlett-Packard initiated a Phase
8 II investigation to determine groundwater flow direction,
9 gradient, and quality and to further define the extent of soil
10 and groundwater contamination. Five additional soil borings and
11 eight groundwater monitoring wells were drilled.

12 2.23. Bromomethane, acetone, TCE, PCE, TCA, and 2-butanone
13 were detected in soil at concentrations of 1,700 ppb, 3,300 ppb,
14 7,200 ppb, 590 ppb, 4,800 ppb, and 4,000 ppb, respectively
15 (Exhibit 8).

16 2.24. TCE, 1,1-DCE, 1,2-dichloroethylene (1,2-DCE),
17 1,1,1-TCA, toluene, ethylbenzene, xylenes, benzene, freon, and
18 chloroform were detected in groundwater. TCE, 1,1-DCE,
19 chloroform, and benzene were detected at concentrations of
20 11,000 ppb, 180 ppb, 7.3 ppb, and 10 ppb, respectively.
21 Reference Exhibit 8 for soil and groundwater results excerpted
22 from the "Phase II Site Characterization Report" April 1988.

23 2.25. The Phase III soil investigation was conducted on
24 September 1988. Soil samples were collected beneath the former
25 waste treatment facility, former chemical storage bunker and
26 pipe trench. The investigation included the drilling of three
27 additional monitoring wells and 33 soil borings.

1 2.26. Results of soil analyses indicate eleven volatile
2 organic compounds (VOCs) in the vicinity of the waste treatment
3 facility. TCE was the most commonly detected with
4 concentrations as high as 31 ppm.

5 2.27. Ten VOC's were detected in soil samples in the
6 vicinity of the chemical storage bunker. 1,1,1-TCA and
7 methylene chloride were the only compounds detected at
8 concentration greater than 1 ppm.

9 2.28. TCE was the primary chemical detected beneath the
10 pipe trench, with concentrations as high as 1.8 ppm. Reference
11 Exhibit 9 for soil results excerpted from "Results of Phase III
12 Soil Investigation, Soil Sampling During Demolition Activities"
13 December 1988.

14 2.29. TCE, 1,1-DCE, 1,2-DCE, 1,1,1-TCA, chloroform, xylene
15 were detected in groundwater at concentration as high as 4,200
16 ppb, 8 ppb, 9.6 ppb, 8.2 ppb, 6.0 ppb, 6 ppb respectively. See
17 Exhibit 10 for groundwater results excerpted from "Results of
18 Phase III Groundwater Investigation" October 1988.

19 2.30. The direction of groundwater flow determined from
20 Site investigations is from an easterly and southeasterly
21 direction (Exhibit 11).

22 2.31. Hydrogeologic investigations have identified two
23 separate aquifer zones within 60 feet of the surface. The first
24 aquifer is at a depth of approximately 15-25 feet. The second
25 aquifer is at a depth of approximately 40 feet.

26 2.32. The facility is located within the Palo Alto City
27 limits. The nearest Palo Alto Municipal supply well is located

1 within one mile of the Site, and a total of three municipal and
2 seven private wells are located within a 1.5-mile radius of the
3 Site. The seven private wells are located in the Barron Park
4 neighborhood, which is directly downstream and downgradient of
5 the facilities. These wells are generally used intermittently
6 for non-drinking domestic water supply. 1,1,1-TCA, TCE, PCE,
7 PCA, and chloroform have been detected in the privately owned
8 wells. TCE was detected in one well at levels above the
9 Department's Action Level for protection of drinking water; all
10 other values detected are below the Department's Action Levels.

11 HEALTH RISK

12 2.33. The primary public health risk posed by the site (as
13 a portion of the Hillview Porter Site) is associated with
14 exposure to contaminated groundwater and surface water. The
15 City of Palo Alto, population 55,225, uses Hetch Hetchy
16 Reservoir as a primary municipal water source. The City also
17 maintains 10 wells as a backup system for municipal supply
18 should the Hetch Hetchy water supply become unavailable.

19 2.34. The Hillview-Porter are is located within the Palo
20 Alto City limits. The nearest Palo Alto municipal supply well
21 (Matadero well) and seven private wells are located in Barron
22 Park neighborhood. A total of three municipal wells (Matadero,
23 Fernando, and Park) are located within a 1.5-mile radius of the
24 intersection of Hillview Avenue and Porter Drive. The private
25 wells are generally used intermittently for nondrinking-water
26 supply. 1,1,1-TCA, TCE, PCE, PCA, and chloroform have been
27 detected in the privately owned wells. TCE was detected in one

1 well at levels above the Department's Action Level for
2 protection of drinking water; all other values detected are
3 below the Department's Action Levels.

4 2.35. Matadero Creek passes through the Barron Park
5 neighborhood. Children from the neighborhood play in and near
6 the creek. This activity may pose a health risk to children
7 from the neighborhood. Humans have been observed harvesting
8 nuts and grasses from the creekbed for purposes of consumption.

9 EXPOSURE PATHWAYS

10 2.36. The contaminants addressed in this Order have been
11 found onsite in soil and groundwater, and in offsite groundwater
12 and surface water.

13 2.37. The main exposure pathways are ingestion of
14 contaminants in water or dermal adsorption of contaminants
15 through surface and groundwater. Worker exposure may occur
16 during excavation activities associated with interim remedial
17 activities or during well installation, development and sampling
18 activities.

19 2.38. All soil contaminants are potential sources of
20 groundwater contamination. Vertical infiltration of surface
21 waters (rainfall or surface runoff) may cause vertical migration
22 of hazardous substances to the groundwater.

23 POTENTIAL HEALTH RISKS OF SUBSTANCES

24 2.39. Acetone. Acetone has been detected in soil at
25 concentrations of 3,300 ug/kg at the Site. Human exposure to
26 acetone is via ingestion, inhalation, and skin or eye contact.
27 Acetone may cause irritation to eyes, nose and throat.

1 Headaches, dizziness, and dermatitis may occur at sufficiently
2 high exposure levels. Acetone is listed as a hazardous material
3 (22 CCR 66680) and as a hazardous waste (40 CFR 261.33(f)).

4 2.40. Benzene. Benzene has been detected at
5 concentrations as high as 10 ppb in groundwater at the Site.
6 The primary toxicological effects of short-term exposure to
7 benzene through inhalation and ingestion are on the central
8 nervous system. At sufficiently high exposure levels,
9 inhalation or ingestion may cause headache, dizziness,
10 drowsiness, and nausea which may progress to convulsions,
11 respiratory paralysis, and death with high vapor concentrations
12 (Arthur D. Little, Inc., 1985). The International Agency for
13 Research on Carcinogens (IARC) lists benzene as a Group I
14 carcinogen (sufficient evidence of human carcinogenicity)
15 (Gilbert et al., 1980). Benzene is listed as a hazardous
16 material in 22 CCR 66680 and as a hazardous waste under 40 CFR
17 261.33(f). The Department's Action Level for benzene in
18 drinking water is 0.7 ppb. The EPA Maximum Contaminant Level
19 (MCL) goal for benzene is zero. Benzene was listed under the
20 Safe Drinking Water and Toxics Enforcement Act of 1986
21 (Proposition 65) in September 1987.

22 2.41. Bromomethane. Bromomethane has been detected in
23 soils at concentrations of 1,700 ug/kg at the Site. Human
24 exposure to bromomethane is through inhalation, percutaneous
25 absorption, ingestion, and eye contact. Bromomethane can be
26 irritating to the eyes, skin, and mucous membranes of the upper
27 respiratory tract. Mild exposure can result in dermatitis,

1 severe exposure may cause burns. Bromomethane attacks the
2 central nervous system and respiratory track. High
3 concentrations can cause lung irritation, headaches, vertigo,
4 nausea, vomiting, and tremors. Extreme exposure may result in
5 death. Chronic affects are limited to the central nervous
6 system. Bromomethane is listed as a hazardous material (22 CCR
7 66680) and hazardous waste (40 CFR 261.33(f)).

8 2.42. 2-butanone (methyl ethyl ketone, MEK). 2-butanone
9 has been detected in soil at concentrations of 4,000 ug/kg at
10 the Site. Human exposure to 2-butanone is through inhalation,
11 ingestion, and contact with eyes and skin. 2-butanone attacks
12 the central nervous system. Sufficient levels of exposure may
13 cause irritation to the eyes and nose, headaches, dizziness, and
14 vomiting. 2-butanone is a hazardous material (22 CCR 66680) and
15 a hazardous waste (40 CFR 261.33(f)).

16 2.43. Chloroform (Trichlormethane). Chloroform has been
17 detected at concentrations as high as 7.3 ppb in monitoring
18 wells at the Site. Humans may be exposed to chloroform through
19 inhalation, ingestion, and dermal contact. Chloroform is a
20 central nervous system depressant and at sufficiently high
21 exposure levels may cause kidney and liver damage (Sax, 1984).
22 There is evidence that suggests chloroform induces mutagenic
23 activity in animals, while conflicting data exist for linking
24 chloroform with tetratogenic disorders (U.S. EPA, 1985b). IARC
25 lists chloroform as a Group I carcinogen. Chloroform is listed
26 as a hazardous material (22 CCR 66680) and as a hazardous waste
27 under 40 CFR 261.33(f). The EPA Primary MCL for drinking water

1 for chloroform is 100 ppb. Chloroform was listed under
2 Proposition 65 in October 1987.

3 2.44. 1,1-Dichloroethylene (1,1-DCE). 1,1-DCE has been
4 detected at concentrations as high as 180 ppb in groundwater at
5 the Site. Short-term exposures to high vapor concentrations of
6 1,1-DCE can result in central nervous system depression, which
7 may progress to unconsciousness with prolonged exposure. The
8 liquid is moderately irritating to the eyes, causing pain,
9 conjunctival irritation, and possible transient injury. The
10 liquid is irritating to the skin after only a few minutes
11 contact (Clayton and Clayton, 1981). Long-term effects include
12 damage to the liver and kidneys. 1,1-DCE is a hazardous waste
13 listed in 40 CFR 261.33(f). The Department's Action Level for
14 1,1-DCE in drinking water is 6 ppb.

15 2.45. 1,2-Dichloroethylene (1,2-DCE). 1,2-DCE has been
16 detected at concentrations as high as 5 ppb in groundwater at
17 the Site. It has anesthetic properties at high concentrations.
18 Humans inhaling high concentrations of the compound may display
19 symptoms of nausea, vomiting, weakness, tremor and cramps,
20 followed by unconsciousness (U.S. EPA, 1985). No data are
21 available to determine the compound's teratogenic and
22 carcinogenic effects. 1,2-DCE is a listed hazardous material in
23 22 CCR 66680 and a hazardous waste under 40 CFR 261.33(f). The
24 Department's Action Level for 1,2-DCE in drinking water is 16
25 ppb.

26 2.46. Dichloromethane (DCM, methylene chloride). DCM was
27 found in soils in concentrations of 2,700 ug/kg at the Site.

1 Human exposure to DCM is through inhalation of vapors,
2 percutaneous absorption of liquid ingestion, and contact with
3 eyes and skin. Repeated contact with skin may cause dermatitis.
4 Liquid and vapor may irritate eyes and upper respiratory tract.
5 At high concentrations, DCM is a mild narcotic; exposure at
6 sufficient concentration may cause headache, giddiness, and
7 numbness. In extreme cases, death may result. DCM is a
8 hazardous material (22 CCR 66680) and a hazardous waste (40
9 CFR 261).

10 2.47. Ethylbenzene. Ethylbenzene has been detected at
11 concentrations of 5.2 ppb in groundwater at the Site. At
12 sufficient vapor concentrations, ethylbenzene can induce
13 irritation of the eyes, nose, throat and skin in humans. At
14 extremely high concentrations, narcosis can occur. Animal data
15 indicate liver and kidney damage upon ingestion of concentra-
16 tions averaging 500 mg/kg/day over a short-term exposure period
17 (U.S. EPA, 1985). Recent studies indicate the potential for
18 reproduction effects, although the compound does not appear to
19 be teratogenic (U.S. EPA, 1985). Ethylbenzene is a listed
20 hazardous material in 22 CCR 66680 and a hazardous waste under
21 40 CFR 261.33(f). The Department's Primary Action Level for
22 ethylbenzene in drinking water is 680 ppb.

23 2.48. Styrene (vinyl benzene). Styrene was detected in
24 soils at concentrations of 800 ug/kg at the Site. Human
25 exposure may be through inhalation, ingestion, and contact with
26 eyes and skin. Liquid and vapor are irritating to eyes, nose,
27 throat, and skin. Styrene attacks the central nervous system.

1 Sufficient concentrations may cause reduced manual dexterity.
2 Acute long-term exposure to sufficiently high concentrations may
3 cause respiratory system paralysis. Styrene is listed as
4 hazardous substance under 22 CCR 66680. The maximum contaminant
5 level (MCL) goal for styrene in drinking water is 140 ppb.

6 2.49. Tetrachlorethylene (PCE, Perchloroethylene). PCE
7 has been detected at concentrations as high as 590 ppb in soil
8 at the Site. Short-term exposure to PCE through ingestion and
9 inhalation may cause nausea, vomiting, headache, dizziness,
10 drowsiness, and tremors. Skin contact with liquid causes
11 irritation and blistering. Both liquid and vapor are irritating
12 to the eyes (Plunkett, 1976). Liver and kidney toxicity are
13 potential chronic of exposure to PCE effects. PCE is a listed
14 hazardous material in 22 CCR 66680 and a hazardous waste under
15 40 CFR 261.33(f). The Department's Action Level for PCE in
16 drinking water is 4.0 ppb.

17 2.50. Trichlorethene (TCE). TCE has been detected at
18 concentrations as high as 11,000 ppb in groundwater and 2,500
19 ppb in soil at the Site. Acute exposure to sufficient
20 concentrations of TCE may depress the central nervous system,
21 causing headache, dizziness, vertigo, tremors, irregular
22 heartbeat, fatigue, nausea, vomiting, and blurred vision. The
23 vapors and liquid may cause irritation of the skin, eyes, nose
24 and throat (Sittig, 1985). Long-term effects may include liver
25 and kidney injury. TCE is a listed hazardous material under 22
26 CCR 66680 and a hazardous waste under 40 CFR 261.33(f). The

27

1 Department's Action Level for TCE in drinking water is 5 ppb.
2 TCE was listed under Proposition 65 in April 1988.

3 2.51. 1,1,1-Trichloroethane (1,1,1-TCA). 1,1,1-TCA has
4 been detected at concentrations of 29 ppb in monitoring wells
5 and 4,800 ppb in soil at the Site. Acute exposure to sufficient
6 concentrations of 1,1,1-TCA may lead to dizziness, drowsiness,
7 lack of coordination, increased reaction time, and irregular
8 heartbeat. Both liquid and vapor may be irritating to the eyes.
9 Skin contact may produce dermatitis (Mackison et al., 1981;
10 Sittig, 1981). The primary long-term effect of significant
11 exposure to 1,1,1-TCA is liver toxicity. 1,1,1-TCA is a
12 hazardous waste listed in 40 CFR 261.33(f). The Department's
13 Action Level for 1,1,1-TCA in drinking water is 100 ppb.

14 2.52. Toluene. Toluene has been detected at
15 concentrations as high as 41 ppb in groundwater under the Site.
16 Acute exposure to high concentrations of toluene may result in
17 central nervous system depression. Liquid splashed in the eyes
18 may cause irritation and corneal damage. Prolonged or repeated
19 skin contact may cause drying and dermatitis (Sittig, 1981).
20 Long-term adverse effects have not been reported. Toluene is a
21 listed hazardous material under 22 CCR 66680. The Department's
22 Action Level for toluene in drinking water is 100 ppb.

23 2.53. Xylene. Xylene has been detected at concentrations
24 as high as 32 ppb in groundwater under the Site. Inhalation of
25 xylene vapors by humans may produce central nervous system
26 disorders, with symptoms of dizziness, nausea, vomiting,
27 drowsiness, abdominal pain, and loss of appetite. Liquid xylene

1 and high concentration xylene vapors may cause eye irritation
2 with possible damage to the cornea. Liquid aspiration of the
3 compound may cause chemical pneumonitis, pulmonary edema, and
4 hemorrhage in the lungs. Chronic effects are similar to acute
5 effects but are potentially irreversible (Sax, 1984). Xylene is
6 a listed hazardous material under 22 CCR 66680 and a hazardous
7 waste under 40 CFR 261.33(f). The Department's Action Level for
8 xylene in drinking water is 620 ppb.

9 2.54. Freon. The term "freon" is used to represent a
10 group of chemical constituents commonly used as refrigerants.
11 Concentrations of the numerous constituents in the group of
12 chemicals are commonly listed as total freon. The specific
13 freon group constituent that has been identified during
14 preliminary investigations onsite is Freon 113
15 (trifluorotrichloroethane). Freon concentrations at the Site
16 were 52 ppb in groundwater. The freon group of chemicals affect
17 the cardiovascular system and can cause dizziness, tremors,
18 unconsciousness, and cardiac arrhythmia and arrest. Freons may
19 be irritating to the throat and skin. Dichlorodifluoromethane
20 is a hazardous waste under 40 CFR 261. The Department's Action
21 Level for trichlorofluoromethane is 3,400 ppb, and 18,000 ppb
22 for trichlorotrifluoroethane.

23 REFERENCES

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III. ORDER

3. Based on the foregoing FINDINGS AND DETERMINATIONS, IT IS HEREBY ORDERED THAT Respondents conduct the following response activities in the manner specified herein and in accordance with a schedule specified by the Department as follows:

3.1. Within 10 days of the effective date of this Order, Respondents shall submit a written notice of their intent to comply with the terms of the Order.

3.2. Interim Measures.

3.2.1. Ground Water Monitoring. Respondents shall continue interim groundwater monitoring. Groundwater level measurements shall be conducted the first Monday of each month; groundwater sampling shall be conducted on a quarterly basis commencing the first week of May. Subsequent sampling shall be conducted the first weeks of August, November and February.

3.2.2. Respondents shall prepare and submit to the Department for review and approval a proposal for interim groundwater and soil treatment. The proposal shall be submitted to the Department 30 days after Phase IV investigation is completed.

3.2.3. Respondents shall undertake additional IRMs if, during the course of the remedial investigation, the Department determines that they are necessary to mitigate the release of hazardous substances at or emanating from the site. The Department may require Respondents to submit an IRM Work Plan,

1 including an implementation schedule, and may establish a
2 schedule for submittal of the IRM Work Plan.

3 3.3. Remedial Investigation and Feasibility Study (RI/FS)

4 3.3.1. RI/FS Workplan Submission. Within (45) days of the
5 effective date of this Order, Respondents shall prepare and
6 submit to the Department for review and approval a detailed
7 RI/FS Workplan and implementation schedule which covers all the
8 activities necessary to conduct a complete remedial investiga-
9 tion and feasibility study of the Site and any off-site areas
10 where there is a release or threatened release of hazardous
11 substances from the Site. Information obtained during Phase I,
12 II, III, and IV Site investigations, may be incorporated in
13 developing the RI workplan. Any information not obtained from
14 previous investigations, that will aid in identifying the
15 source and extent of contamination migrating from the Site, must
16 be addressed in the RI workplan. The workplan and activities
17 under it shall, at a minimum, be based on the Comprehensive
18 Environmental Response, Compensation and Liability Act (CERCLA)
19 (42 U.S.C. 9601 et seq.), as amended, the National Contingency
20 Plan (40 CFR Part 300), as amended, and the most current U.S.
21 Environmental Protection Agency's "Guidance on Remedial
22 Investigation under CERCLA" and "Guidance on Feasibility Studies
23 under CERCLA", as well as State laws and regulations, as
24 amended. The RI/FS workplan shall be designed to meet the
25 objectives of paragraph 3.3.2 and shall, at a maximum, cover all
26 of the elements described in Exhibit 12.

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1 3.3.2. RI/FS Objectives. The objectives of the RI/FS are
2 to: (a) Determine the nature and full extent of hazardous
3 substance contamination of soil, surface water and ground water
4 at the Site and contamination from the Site, including offsite
5 areas affected by the Site;

6 (b) Identify all existing and potential migration
7 pathways, including the direction, rate and dispersion of
8 contaminant migration;

9 (c) Determine the magnitude and probability of actual or
10 potential harm to public health, safety or welfare or to the
11 environment posed by the threatened or actual release of
12 hazardous substances at or from the Site;

13 (d) Identify and evaluate appropriate response measures to
14 prevent or minimize future releases and mitigate any releases
15 which have already occurred; and

16 (e) Collect and evaluate the information necessary to
17 prepare a Remedial Action Plan (RAP) in accordance with the
18 requirements of Health and Safety Code Section 25356.1. The
19 minimum requirements of the RI/FS are outlined in Exhibit 12.7.

20 3.3.3. RI/FS Workplan Implementation. Respondents shall
21 implement the RI/FS Workplan as approved by the Department in
22 accordance with the approved schedule.

23 3.4. Community Relations Plan. Hewlett-Packard will
24 continue the development and submittal of site specific fact
25 sheets to the Department when key milestones are projected
26 and/or completed or when specifically requested by the
27

1 Department. Hewlett-Packard will be responsible for distribu-
2 tion of such upon Departmental approval. The above is valid
3 only if Respondents comply with the Hillview Porter RAO #HSA
4 88/89-016. If Respondents fail to comply with Hillview
5 Porter RAO #HSA 88/89-016, Respondents shall, within 30 days
6 after the final determination of noncompliance has been issued,
7 or, upon the Department's request, prepare and submit for
8 Department review and approval a community relations plan which
9 describes how, under the Order, the public and the adjoining
10 community will be kept informed of activities conducted at the
11 Site and how Respondents will be responding to inquiries from
12 concerned citizens. The community relations plan must be
13 developed in accordance with Exhibit 13.

14 3.5. Remedial Action Plan.

15 3.5.1. Draft Remedial Action Plan. No later than 30 days
16 after Department approval of the Feasibility Study Report,
17 Respondents shall prepare and submit to the Department for
18 review and approval a draft Remedial Action Plan which is based
19 on the approved Remedial Investigation and Feasibility Study
20 Reports. The draft RAP shall set forth in detail appropriate
21 steps to remedy soil, surface water and ground water contamina-
22 tion at the Site and adjacent areas. The RAP shall be prepared
23 in accordance with the standards and requirements set forth in
24 Health and Safety Code Section 25356.1. In addition, the RAP
25 shall contain a schedule for implementation of all proposed
26 removal and remedial actions.

27

1 3.5.2. Preparation of Remedial Design (RD) and
2 Implementation Plan (IP). Within 90 days after Department
3 approval of the final RAP and in accordance with Health and
4 Safety Code Section 25356.1, Respondents shall submit to the
5 Department for review and approval a detailed Remedial Design
6 and Implementation Plan (RDIP) containing technical and
7 operational plans and engineering designs for implementation of
8 the approved remedial or removal action alternative(s), and a
9 schedule for implementing the construction phase. The Workplan
10 shall also describe the nature and design of the construction
11 equipment to be employed, a site specific hazardous waste
12 transportation plan (if necessary), the identity of any
13 contractors, transporters and other persons conducting the
14 removal and remedial activities for the Site, post remedial
15 sampling and monitoring procedures for air, soil, surface water
16 and ground water, operation and maintenance procedures and
17 schedules, and shall cover all of the subjects described in
18 Exhibit 12, paragraphs 3.2.3 (a),(c),(d), (e) and (f) as they
19 pertain to the removal, remedial and operation and maintenance
20 activities. The schedule submitted with the workplan shall
21 provide that all approved removal or remedial actions excluding
22 operation and maintenance shall be completed by no later than
23 one year from finalization of the RDIP.

24 3.5.3. Implementation of Final RAP. Upon Department
25 approval of the RD Plan and schedule, Respondents shall
26 implement the final RAP as approved in accordance with the
27 approved Remedial Design and schedule.

1 3.5.4. Operation and Maintenance. Respondents shall be
2 responsible for all operation and maintenance requirements in
3 accordance with the final RAP and approved Remedial Design
4 Workplan.

5 3.5.5. Changes During Implementation of the Final RAP.
6 During the implementation of the final RAP and Remedial Design
7 Workplan, the Department may specify such additions,
8 modifications and revisions to the Remedial Design and
9 Implementation Plan as deemed necessary to protect public health
10 and safety or the environment or to implement the RAP.

11 3.5.6. Discontinuation of Remedial Technology. Any
12 remedial technology employed in implementation of the final RAP
13 shall be left in place and operated by Respondents until and
14 except to the extent that the Department authorizes Respondents
15 in writing to discontinue, move or modify some or all of the
16 remedial technology because Respondents have met the criteria
17 specified in the final RAP for its discontinuance or because the
18 modifications would better achieve the goals of the final RAP.

19 3.6. Project Coordinator. Within 10 days of the effective
20 date of this Order, Respondents shall submit to the Department
21 in writing the name, address and telephone number of a Project
22 Coordinator whose responsibilities will be to receive all
23 notices, comments, approvals and other communications from the
24 Department to Respondents.

25 3.7. Project Engineer/Geologist. The work performed
26 pursuant to this Order shall be under the direction and
27 supervision of a qualified professional engineer or a registered

1 geologist in the State of California with expertise in hazardous
2 waste site cleanup. Within fifteen (15) calendar days of the
3 effective date of this Order, Respondents must submit: a) The
4 name and address of the project engineer or geologist chosen by
5 the Respondents; and (b) in order to demonstrate expertise in
6 hazardous waste cleanup, the resume of the engineer or geologist
7 and the statement of qualifications of the consulting firm
8 responsible for the work.

9 3.8. Monthly Summary Reports. Within 30 days of the
10 effective date of this Order and monthly thereafter, Respondents
11 shall submit a Monthly Summary Report of its activities under
12 the provisions of this Order. The report shall describe: a)
13 specific actions taken by or on behalf of Respondents during the
14 previous month; b) actions expected to be undertaken during the
15 current month; c) all planned activities for the next month, any
16 requirements under this Order that were not completed and any
17 problems or anticipated problems in complying with this Order;
18 and d) all results of sample analyses, tests and other data
19 generated or received by Respondents under this Order. The
20 Monthly Summary Report shall be received by the Department by
21 the 15th day of the month.

22 3.9. Quality Control/Quality Assurance. All sampling and
23 analysis conducted by Respondents under this Order shall be
24 performed in accordance with quality control/quality assurance
25 procedures submitted by Respondents and approved by the
26 Department pursuant to this Order.

27

1 3.10. Submittals. All submittals and notifications from
2 Respondents required by this Order shall be sent simultaneously
3 to:

4 Howard K. Hatayama, Chief
5 Region 2
6 Toxic Substances Control Division

7 and

8 Miguel Parra
9 Waste Management Engineer
10 Region 2
11 Toxic Substances Control Division

12 By Mail:

13 2151 Berkeley Way, Annex 7
14 Berkeley, CA 94704

15 By Courier:

16 5850 Shellmound Street, Suite 100
17 Emeryville, CA 94608

18 Mark Wilson
19 Regional Water Quality Control Board
20 San Francisco Bay Region
21 1111 Jackson Street, Room 6040
22 Oakland, CA 94607

23 EPA, Region IX
24 Attn: Gerald Clifford, Superfund Program
25 Manager
26 215 Fremont Street
27 San Francisco, CA 94105

 Lee Esquibel
 Santa Clara County Department
 of Environmental Health
 2220 Moorpark Avenue
 San Jose, CA 95128

 3.11. Communications. All approvals and decisions of the
Department made regarding submittals and notifications will be
communicated to Respondents in writing by the Section Chief,
Toxic Substances Control Division, Department of Health Services

1 or his/her designee. No informal advice, guidance, suggestions
2 or comments by the Department regarding reports, plans
3 specifications, schedules or any other writings by Respondents
4 shall be construed to relieve Respondents of the obligation to
5 obtain such formal approvals as may be required.

6 3.12. Department Review and Approval. If the Department
7 determines that any report, plan, schedule or other document
8 submitted for approval pursuant to this Order fails to comply
9 with this Order or fails to protect public health or safety or
10 the environment, the Department may:

11 a) modify the document as deemed necessary and approve the
12 document as modified or; b) return the document to Respondents
13 with recommended changes and a date by which Respondents must
14 submit to the Department a revised document incorporating the
15 recommended changes or; c) in cases where the document fails to
16 comply with this Order, make a determination of noncompliance
17 pursuant to Health and Safety Code Section 25355.5(a)(92).

18 3.13. Compliance with Applicable Laws. Respondents shall
19 carry out this Order in compliance with all applicable State,
20 and Federal requirements, including but not limited to,
21 requirements to obtain permits and to assure worker safety.

22 3.14. Endangerment During Implementation. In the event
23 that the Department determines that any circumstances or
24 activities (whether or not pursued in compliance with this
25 order) are creating an imminent or substantial endangerment to
26 the health or safety of people on the Site or in the surrounding
27 area or to the environment, the Department may order Respondents

1 to stop further implementation of this Order for such period of
2 time as needed to abate the endangerment. Any deadline in this
3 Order directly affected by a Stop Work Order under this section
4 shall be extended for the term of the Stop Work Order.

5 3.15. Liability. Nothing in this Order shall constitute
6 or be construed as a satisfaction or release from liability for
7 any conditions or claims arising as a result of past, current or
8 future operations of Respondents. Nothing in this Order is
9 intended or shall be construed to limit the rights of any of the
10 parties with respect to claims arising out of or relating to the
11 deposit or disposal at any other location of substances removed
12 from the Site. Nothing in this Order is intended or shall be
13 construed to limit or preclude the Department from taking any
14 action authorized by law to protect public health or safety or
15 the environment and recovering the cost thereof. Notwithstand-
16 ing compliance with the terms of this Order, Respondents may be
17 required to take further actions as are necessary to protect
18 public health or the environment.

19 3.16. Site Access. Access to the Site and laboratories
20 used for analyses of samples under this Order shall be provided
21 at all reasonable times to employees, contractors and
22 consultants of the Department. Nothing in this paragraph is
23 intended or shall be construed to limit in any way the right of
24 entry or inspection that the Department or any other agency may
25 otherwise have by operation of any law. The Department and its
26 authorized representatives shall have the authority to enter and
27 move freely about all property at the Site at all reasonable

1 times for purposes including, but not limited to: inspecting
2 records, operating logs, sampling and analytic data, and
3 contracts relating to this Site; reviewing the progress of
4 Respondents in carrying out the terms of this Order; conducting
5 such tests as the Department may deem necessary; and verifying
6 the data to the Department by Respondents.

7 3.17. Sampling, Data and Document Availability.

8 Respondents shall permit the Department and its authorized
9 representatives to inspect and copy all sampling, testing,
10 monitoring or other data generated by Respondents or on
11 Respondents behalf in any way pertaining to work undertaken
12 pursuant to this Order. Respondents shall inform the Department
13 at least five days in advance of all field sampling under this
14 Order and shall allow the Department and its authorized
15 representatives to take duplicates of any samples collected by
16 Respondents pursuant to this Order. All such data, reports and
17 other documents shall be preserved by Respondents for a minimum
18 of six years after the conclusion of all activities under this
19 Order. If the Department requests that some or all of these
20 documents be preserved for a longer period of time, Respondents
21 shall either comply with that request or deliver the documents
22 prior to destruction. Respondents shall notify the Department
23 in writing at least six months prior to destroying any documents
24 prepared pursuant to this Order.

25 3.18. Government Liabilities. The State of California
26 shall not be liable for any injuries or damages to persons or
27 property resulting from acts or omissions by Respondents, or

1 related parties specified in paragraph 3.27 in carrying out
2 activities pursuant to this Order, nor shall the State of
3 California be held as party to any contract entered into by
4 Respondents or its agents in carrying out activities pursuant to
5 this Order.

6 3.19. Additional Enforcement Actions. By issuance of this
7 Order, the Department does not waive the right to take any
8 further enforcement actions.

9 3.20. Incorporation of Plans and Reports. All plans,
10 schedules, reports, specifications and other documents that
11 require Department approval and are submitted by Respondents
12 pursuant to this Order are incorporated in this Order upon
13 approval by the Department and shall be implemented by
14 Respondents as approved. Any noncompliance with such documents
15 shall be a noncompliance with this Order.

16 3.21. Extension Requests. If Respondents are unable to
17 perform any activity or submit any document within the time
18 required under this Order, Respondents may, prior to expiration
19 of the time, request an extension of the time in writing. The
20 extension request shall include a justification for the delay.
21 All such requests shall be in advance of the date on which the
22 activity or document is due.

23 3.22. Extension Approvals. If the Department determines
24 that good cause exists for an extension it will grant the
25 request and specify in writing a new schedule. Respondents
26 shall comply with the new schedule.

27

1 3.23. Cost Recovery. Respondents are liable for any costs
2 of oversight by the Department of Respondents' activities under
3 this Order. In addition, failure or refusal of Respondents to
4 comply with this Order may make Respondents liable for any
5 governmental costs incurred, including those payable from the
6 Hazardous Substance Account or the Hazardous Substance Cleanup
7 Fund for any response action at the Site, as provided in Section
8 25360 of the Health and Safety Code and other applicable
9 provisions of law. These costs include the Department's direct
10 costs and administrative overhead costs. Cost recovery may also
11 be pursued by the Department under CERCLA.

12 3.24. Severability. The requirements of this Order are
13 severable, and Respondents shall comply with each and every
14 provision hereof notwithstanding the effectiveness of any other
15 provision.

16 3.25. Modifications. The Department reserves the right to
17 unilaterally modify this Order. Any modification to this Order
18 shall be effective upon issuance and deemed incorporated in this
19 Order.

20 3.26. Time Periods. Unless otherwise specified, time
21 periods begin from the effective date of this Order and "days"
22 means calendar days. The effective date of this Order is the
23 date of issuance by the Department.

24 3.27. Parties Bound. This Order applies to and is binding
25 upon Respondents and its officers, directors, agents, employees,
26 contractors, consultants, receivers, trustees, successors and
27 assignees, including but not limited to, individuals, partners

1 and subsidiary and parent corporations and upon any successor
2 agency of the State of California that may have responsibility
3 for and jurisdiction over the subject matter of this Order.

4
5 Date of Issuance 3/21/87

6
7
8 C. David Willis
9 C. David Willis
10 Deputy Director
11 Toxic Substances Control
12 Division
13 Department of Health Services
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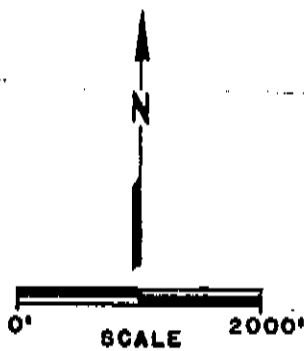
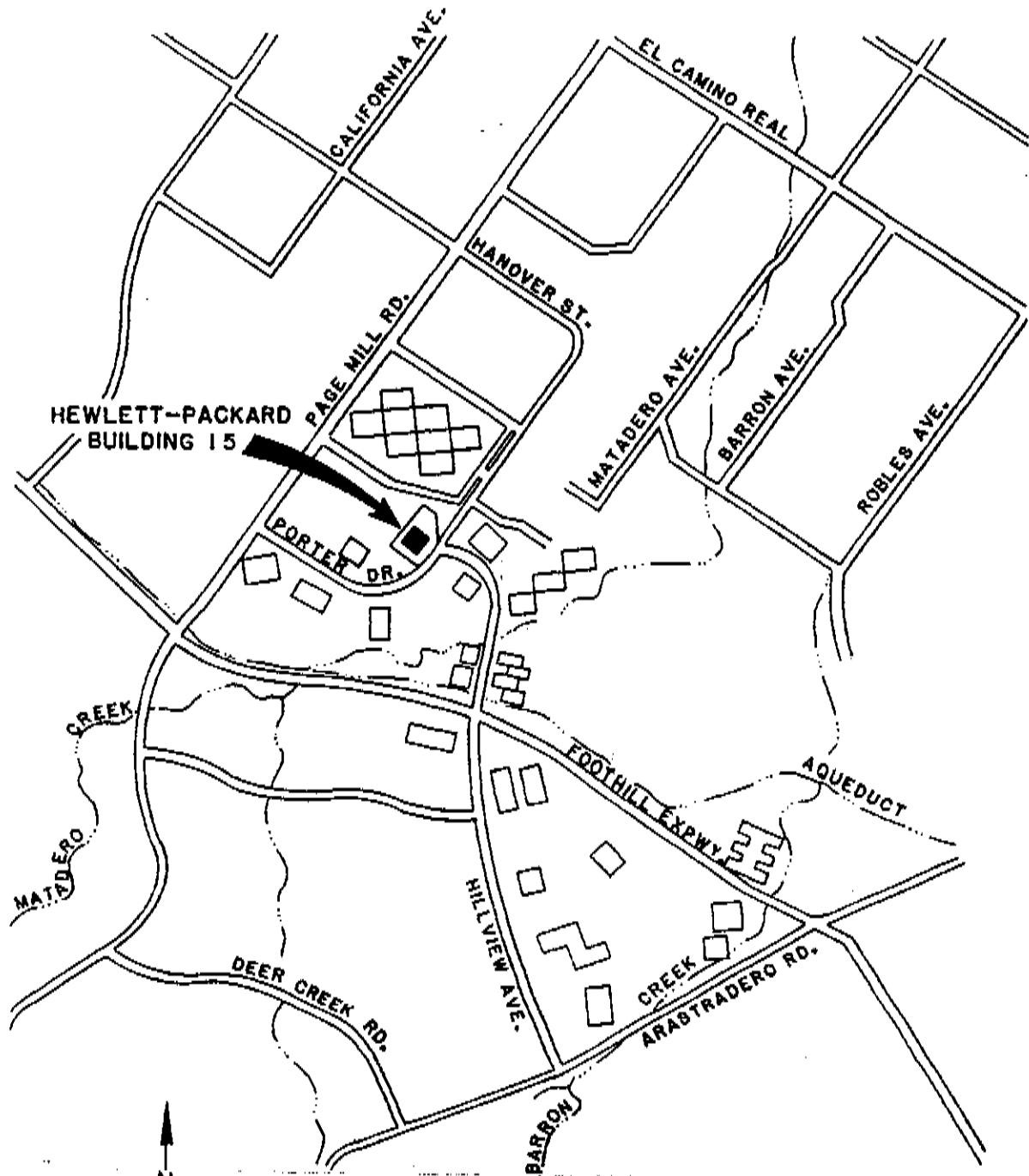
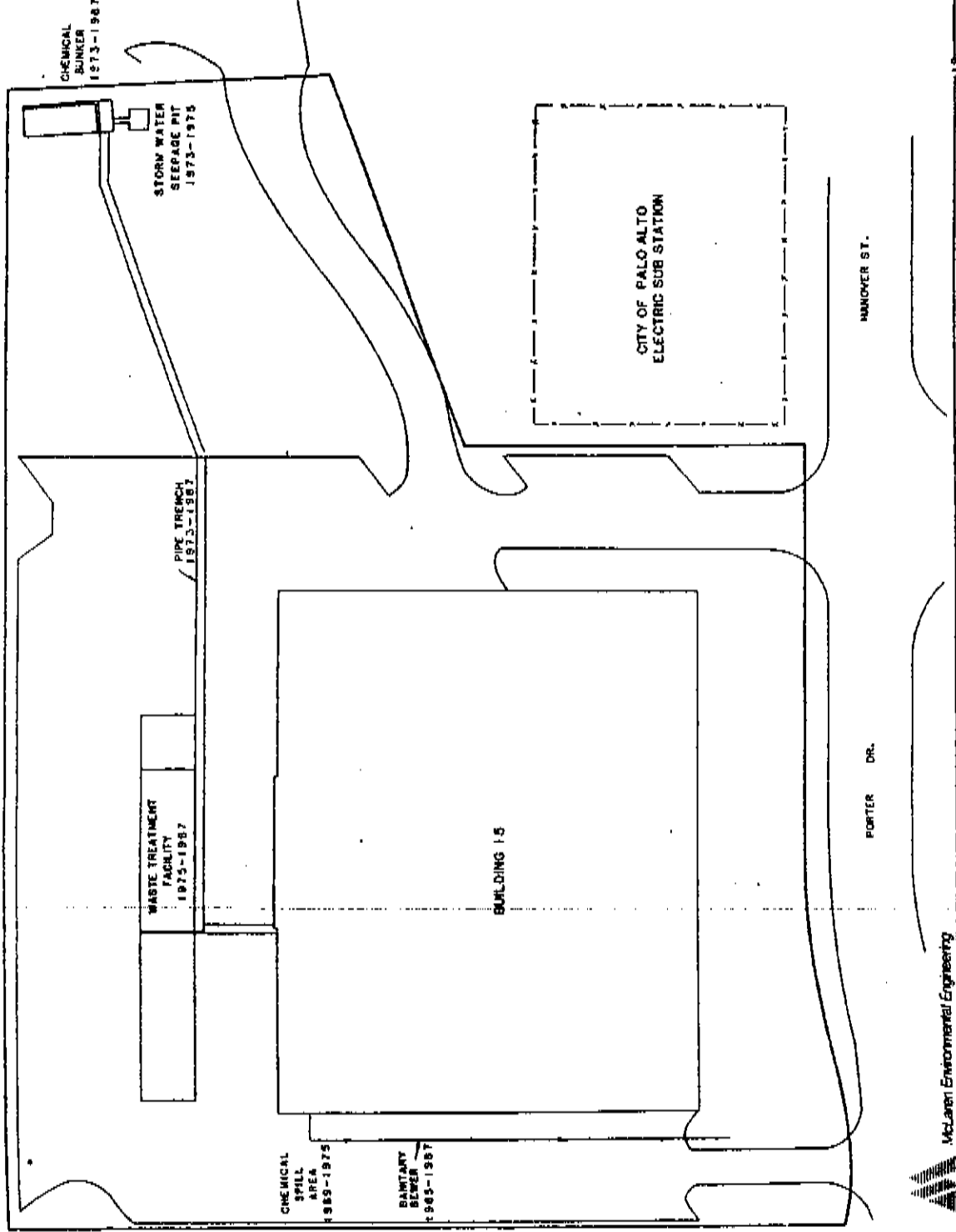


EXHIBIT 2

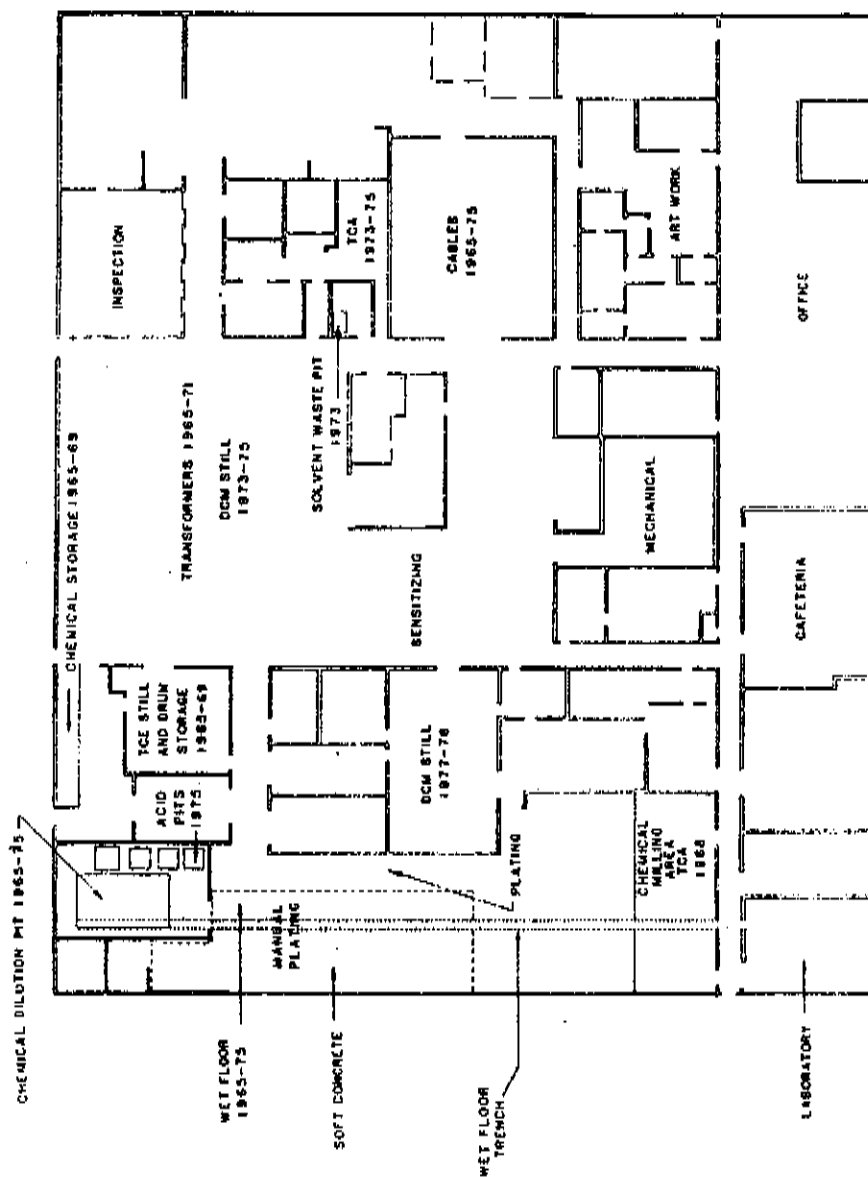
LOCATION AND PERIOD OF USE
OF FACILITIES OUTSIDE
BUILDING 15



McLaren Environmental Engineering

EXHIBIT 3

LOCATION AND PERIOD OF USE
OF POTENTIAL SOURCE AREAS
INSIDE BUILDING 15



0' SCALE 25'

EXHIBIT 4

CHEMICALS USED AT BUILDING 15
FROM 1973 TO 1980

Acetic Acid
Cadmium Compounds
Calcium Hydroxide
Carbon Tetrachloride
Chloroform
Chromium Compounds
Ferrous Sulfate
Formaldehyde
Freon 113
Lead
Maleic Anhydride
Manganese
Mercury
Methylene Chloride
Nickel Compounds
Nitric Acid
Nitrobenzene
o,m,p Xylene
Phenol
Phosphoric Acid
Sodium Hydroxide
Sulfuric Acid
Tetrachloroethylene
Trichloroethylene
1,1,1-Trichloroethane



SEQUOIA Analytical Laboratory

2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Joel Lindsay

Date Sampled: 09/16/86
Date Received: 09/16/86
Date Extracted: 10/10/86
Date Reported: 10/13/86
Project No. STU111A

Sample Number

6090983

Sample Description

3775 El Centro,
Water

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS

results in ppb

Acrolein.....	<100	trans-1,2-Dichloroethene.....	< 0.5
Acrylonitrile.....	<100	1,2-Dichloropropane.....	< 0.5
Benzene.....	< 0.5	1,3-Dichloropropene.....	< 0.5
Bromomethane.....	< 0.5	Ethylbenzene.....	< 0.5
Bromodichloromethane.....	< 0.5	Methylene chloride.....	< 0.5
Bromoform.....	< 0.5	1,1,2,2-Tetrachloroethane.....	< 0.5
Carbon tetrachloride.....	< 0.5	Tetrachloroethene.....	< 0.5
Chlorobenzene.....	< 0.5	1,1,1-Trichloroethane.....	0.54
Chloroethane.....	< 0.5	1,1,2-Trichloroethane.....	< 0.5
2-Chloroethylvinyl ether.....	< 0.5	Trichloroethene.....	9.5
Chloroform.....	< 0.5	Toluene.....	< 0.5
Chloromethane.....	< 0.5	Vinyl chloride.....	< 0.5
Dibromochloromethane.....	< 0.5	1,2-Dichlorobenzene.....	< 0.5
1,1-Dichloroethane.....	< 0.5	1,3-Dichlorobenzene.....	< 0.5
1,2-Dichloroethane.....	< 0.5	1,4-Dichlorobenzene.....	< 0.5
1,1-Dichloroethene.....	< 0.2		

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

NOTE: Method 601 & 602 of the EPA was
used for this analysis.

sls

EXHIBIT 6

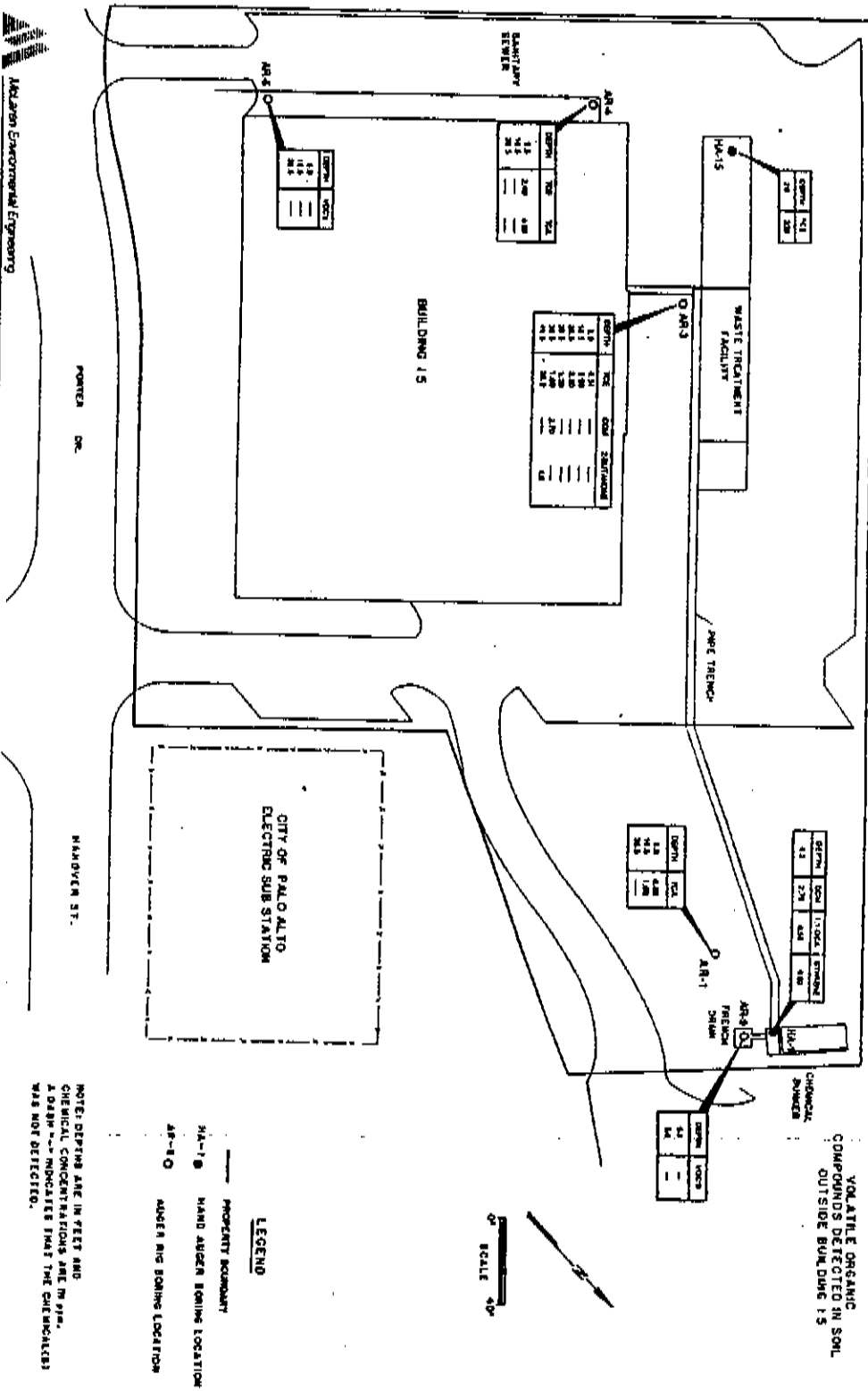
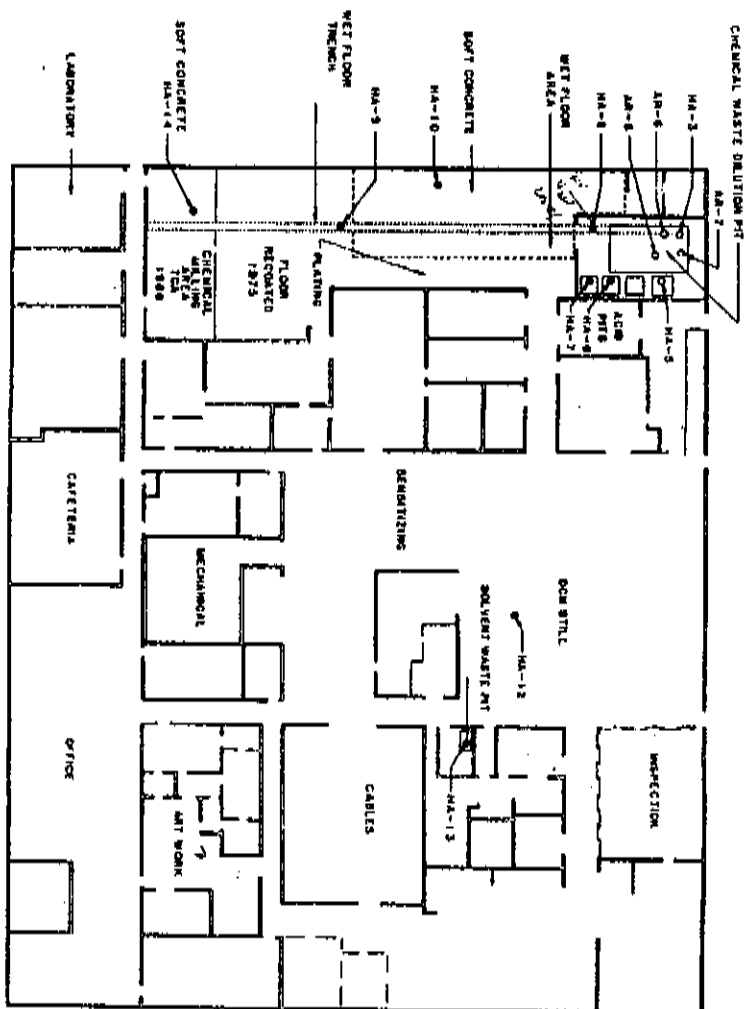


EXHIBIT 6 cont.



LOCATIONS OF SOIL
BORINGS INSIDE BUILDING 15

0' 29"

LEGEND

- Q NAME AND GEN (IN) ROOMS LOCATIONS
O AUGER AND (AN) ROOMS LOCATIONS

VOLATILE ORGANIC COMPOUNDS
DETECTED IN SOIL BENEATH
BUILDING 13 IN CHEMICAL
STORAGE ROOM

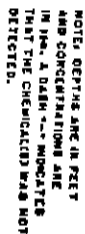
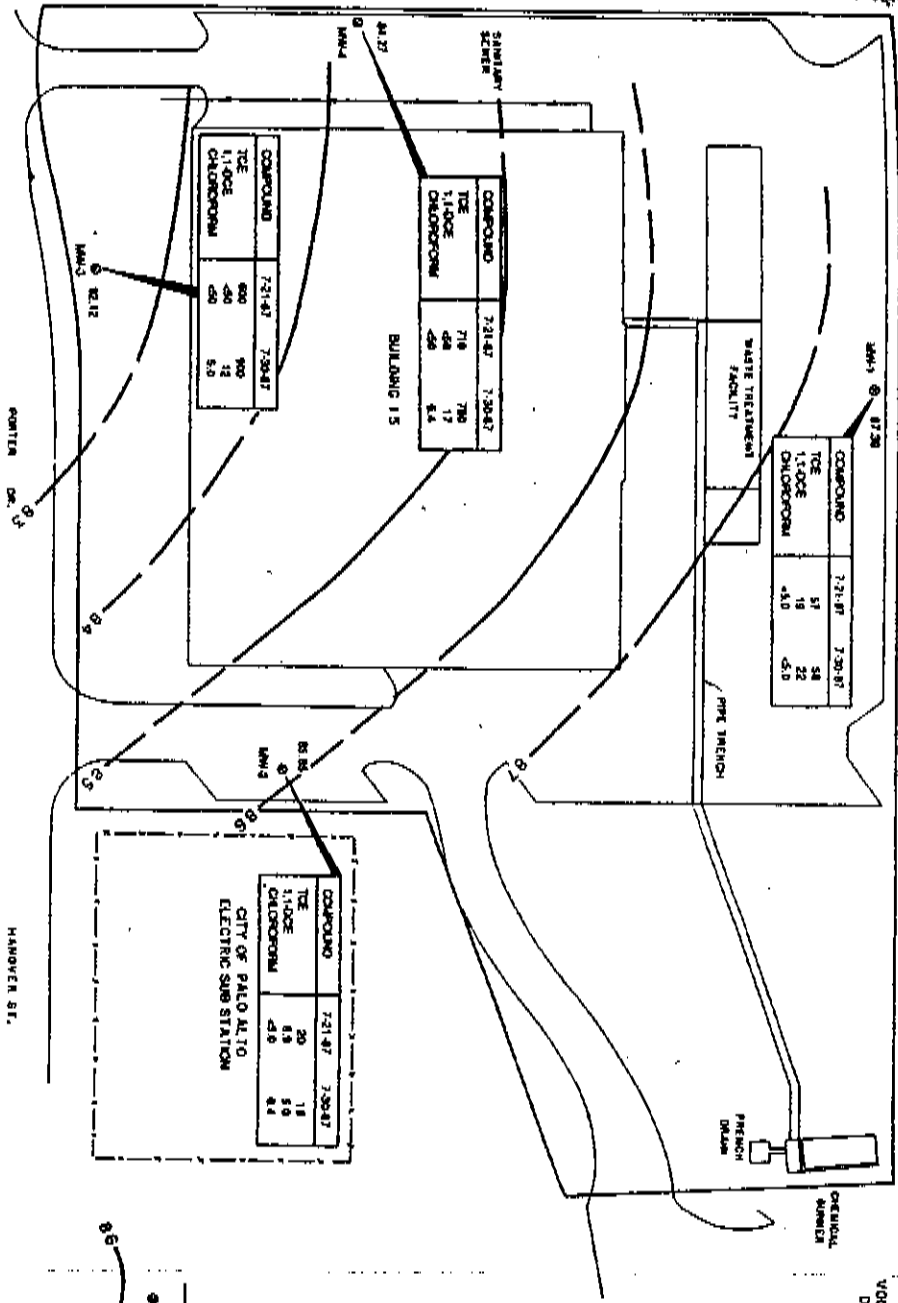


EXHIBIT 7



VOLATILE ORGANIC COMPOUNDS
DETECTED IN GROUNDWATER

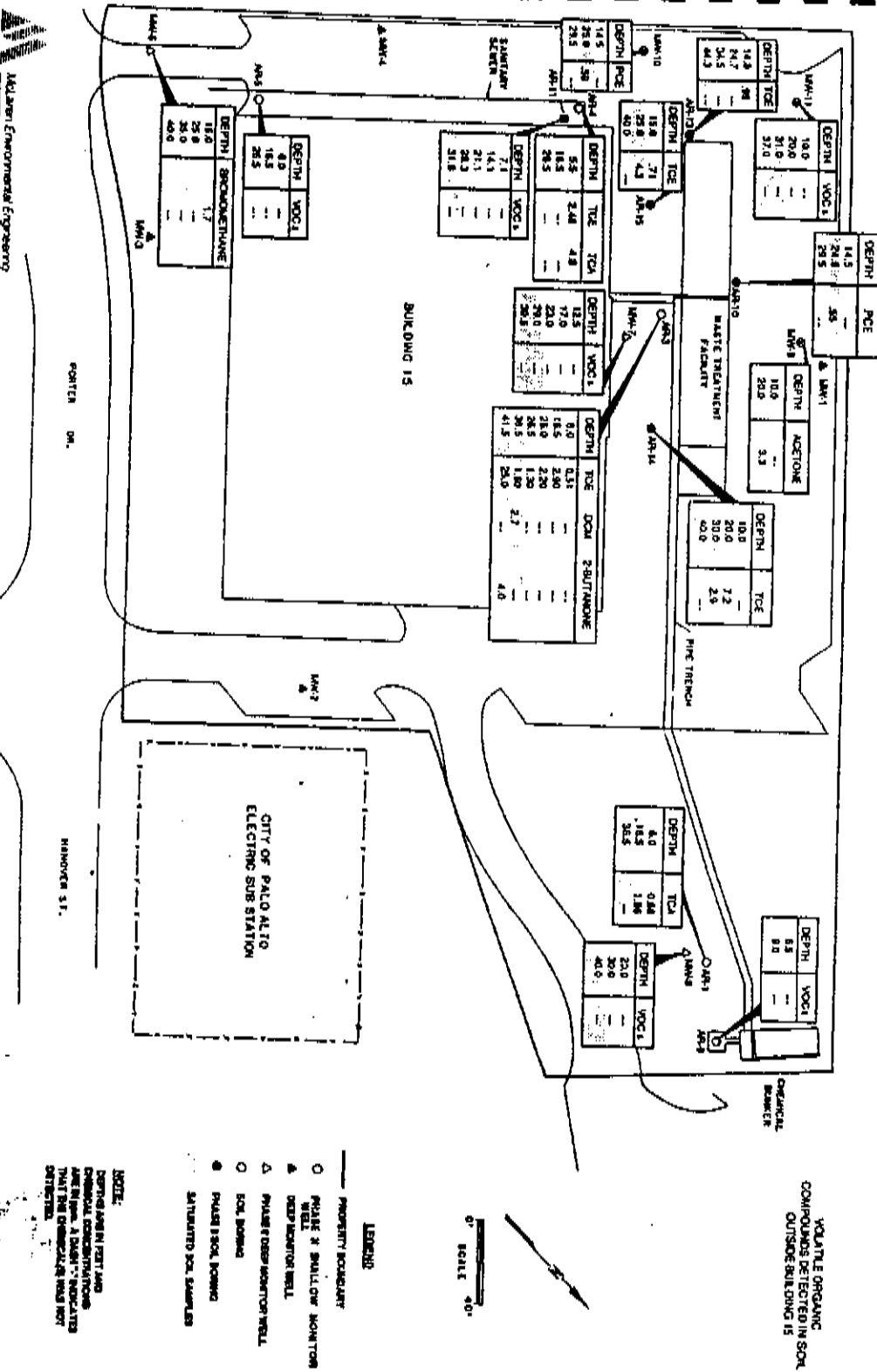
0' SCALE 40'

LEGEND

- PROPERTY BOUNDARY
- MONITOR WELL LOCATION
- PIEZOMETRIC SURFACE ELEVATION CONTOUR, FEET MSL, AUGUST 28, 1987

NOTE: ALL CHEMICAL CONCENTRATIONS ARE IN PPB.

EXHIBIT 8



McLaren Environmental Engineering

0" SCALE 40'

EXHIBIT 8 CONT.

SOIL ANALYTICAL RESULTS

(PPM)

SOIL BORING	DEPTH (feet)	BROMOMETHANE	ACETONE	TRICHLOROETHENE	TETRACHLOROETHENE
AR-10	14.5	ND ¹	ND	ND	ND
	24.5	ND	ND	ND	0.55
	29.5	ND	ND	ND	ND
AR-11 <i>well pts</i> (slant boring)	7.5	ND	ND	ND	ND
	14.1	ND	ND	ND	ND
	21.1	ND	ND	ND	ND
	28.3	ND	ND	ND	ND
	31.8	ND	ND	ND	ND
AR-12 ?? <i>no result</i>					
AR-13					
(slant boring)	14.8	ND	ND	0.99	ND
	24.5	ND	ND	ND	ND
	34.5	ND	ND	ND	ND
	44.5	ND	ND	ND	ND

¹ND - Not Detected

ALA/052488

EXHIBIT 8 cont.

SOIL ANALYTICAL RESULTS

(PPM)

SOIL BORING	DEPTH (feet)	BROMOMETHANE	ACETONE	TRICHLOROETHENE	TETRACHLOROETHENE
<u>AR-14</u>	10.0	ND	ND	ND	ND
	20.0	ND	ND	7.2	ND
	30.0	ND	ND	2.9	ND
	40.0	ND	ND	ND	ND
<u>AR-15</u>	15.0	ND	ND	0.71	ND
	25.0	ND	ND	4.3	ND
	40.0	ND	ND	ND	ND
<u>MW-6</u>	15.0	1.7	ND	ND	ND
	25.0	ND	ND	ND	ND
	35.0	ND	ND	ND	ND
	40.0	ND	ND	ND	ND
<u>MW-7</u>	12.5	ND	ND	ND	ND
	17.0	ND	ND	ND	ND
	23.0	ND	ND	ND	ND
	29.0	ND	ND	ND	ND
	39.5	ND	ND	ND	ND
<u>MW-8</u>	20.0	ND	ND	ND	ND
	30.0	ND	ND	ND	ND
	40.0	ND	ND	ND	ND

EXHIBIT 8 cont.

SOIL ANALYTICAL RESULTS

(PPM)

SOIL BORING	DEPTH (feet)	BROMOMETHANE	ACETONE	TRICHLOROETHENE	TETRACHLOROETHENE
<u>HW-9</u>	10.0	ND	ND	ND	ND
	20.0	ND	3.3	ND	ND
<u>HW-10</u>	14.5	ND	ND	ND	ND
	25.0	ND	ND	ND	0.59
	29.5	ND	ND	ND	ND
<u>HW-11</u>	10.0	ND	ND	ND	ND
	20.0	ND	ND	ND	ND
	31.0	ND	ND	ND	ND
	37.0	ND	ND	ND	ND

IV-11

EXHIBIT 8 cont.

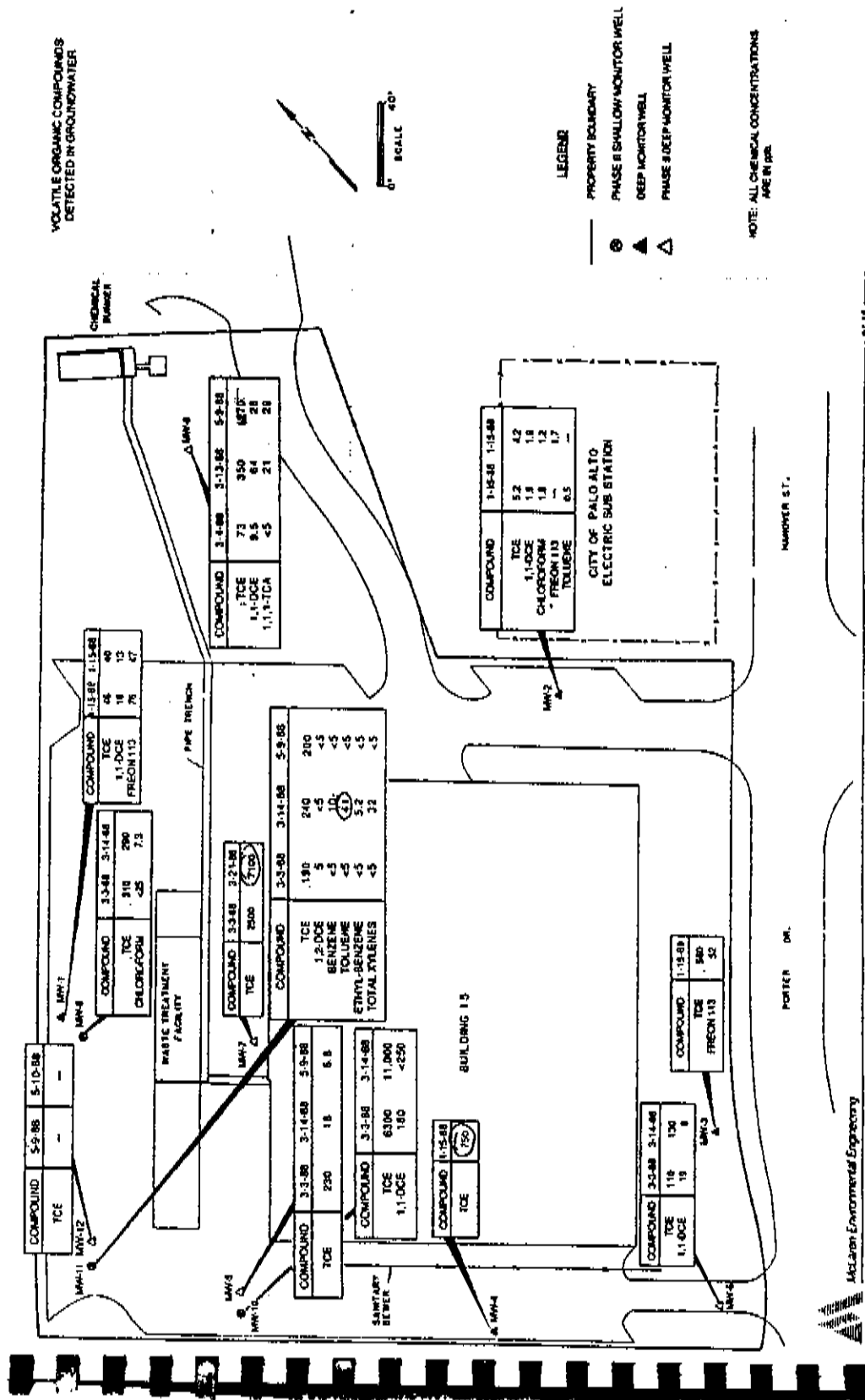
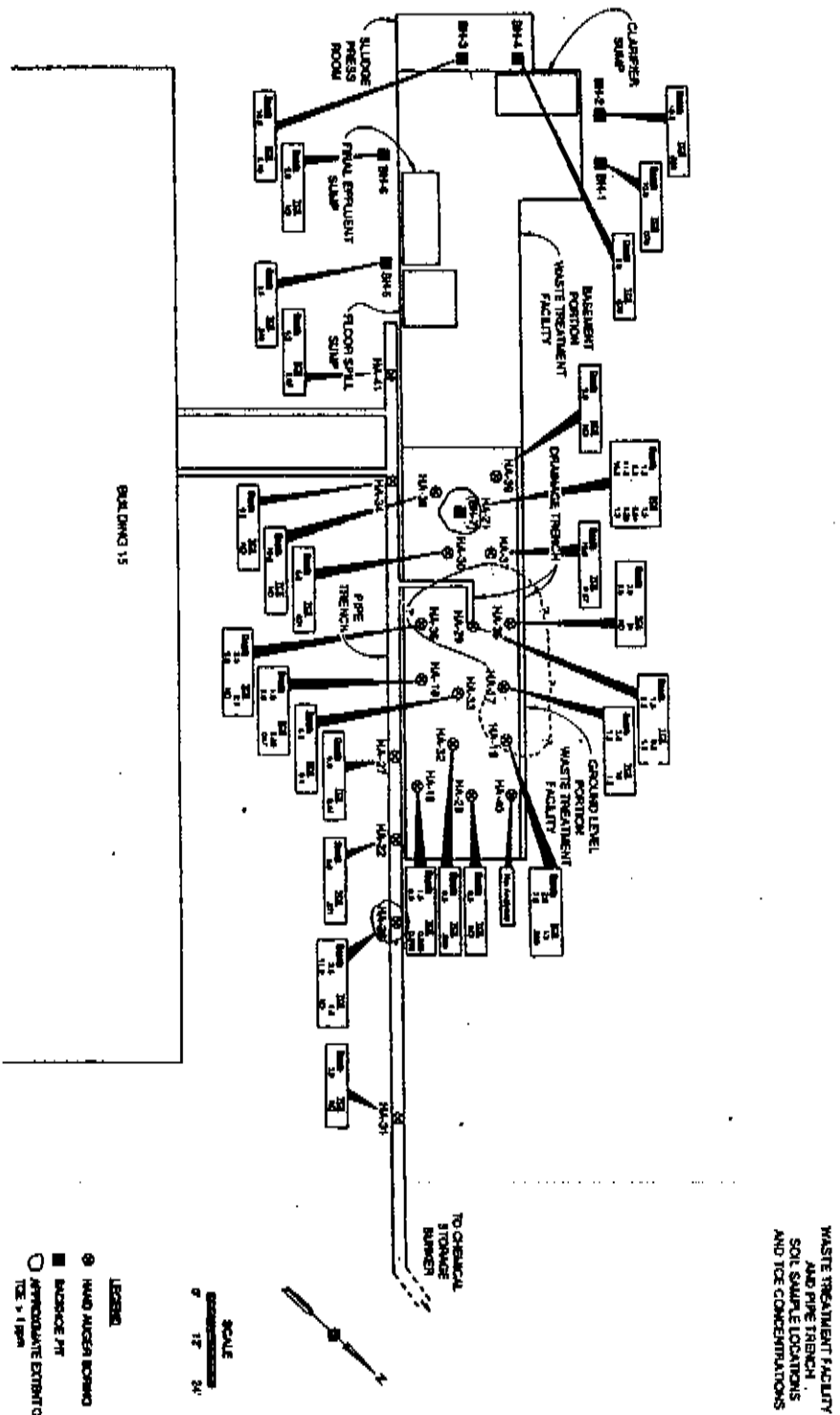


EXHIBIT 9



WASTE TREATMENT FACILITY
AND PIPE TRENCH
SOL SAMPLE LOCATIONS
AND TOC CONCENTRATIONS

SCALE
0 12 24
FEET

LEGEND
● HAND AUGER BORING
■ BACKHOE PIT
○ APPROXIMATE EXTENT OF
TOC > 1 PPM
NO. COMPOUND NOT DETECTED
NOTE: ALL DATA ARE IN FEET AND ALL
CONCENTRATIONS IN PPM.

EXHIBIT 9 cont.

SUMMARY OF VOLATILE ORGANIC COMPOUNDS DETECTED
IN SOIL SAMPLES COLLECTED IN THE VICINITY
OF THE WASTE TREATMENT FACILITY
(ppm)

Compound	Boring:		HA-16		HA-17		HA-18		HA-19	
	(feet):	Depth*	1.5	6.0	2.0	7.0	1.5	6.0	2.0	7.0
1,1-Dichloroethane	---	---	---	---	0.039	---	---	---	0.064	---
1,2-Dichloroethene (total)	0.84	---	---	---	0.45	0.052	0.9	0.011	0.45	---
1,1,1-Trichloroethane	---	---	---	---	---	---	---	---	---	---
4-Methyl-2-pentanone	---	---	---	---	0.17	0.061	---	---	0.66	0.17
Acetone	---	---	---	---	---	---	---	---	---	---
Chlorobenzene	---	---	---	---	---	---	---	---	0.05	---
Tetrachloroethene	---	---	---	---	0.020	---	---	---	---	---
Tetrahydrofuran	---	---	---	---	---	---	---	---	---	---
Toluene	---	---	---	---	0.19	---	---	---	---	---
Trichloroethene	0.036	0.078	19	1.5	0.69	0.047	13	0.088	---	---
Xylenes (total)	---	---	---	0.046	---	---	---	---	0.03	---

^a Indicates below reporting limit

* Indicates top of 0.5 foot sample interval

EXHIBIT 9 cont.

SUMMARY OF VOLATILE ORGANIC COMPOUNDS DETECTED
IN SOIL SAMPLES COLLECTED IN THE VICINITY
OF THE WASTE TREATMENT FACILITY
(ppm)

Compound	Boring: BII-7/HA-21					HA-28	HA-29	HA-30
	Depth* (feet):							
1,1-Dichloroethane	1.5	5.5	11.0	16.0	6.5	1.5	6.5	6.0
1,2-Dichloroethene (total)	---	---	---	---	---	---	---	---
1,1,1-Trichloroethane	0.086	---	---	---	---	0.14	0.025	---
4-Methyl-2-pentanone	---	---	---	0.3	---	---	0.025	---
Acetone	6.1	---	---	---	---	---	---	---
Chlorobenzene	---	---	---	---	---	---	---	---
Tetrachloroethene	0.05	---	---	---	---	0.028	0.31	---
Tetrahydrofuran	---	---	---	0.25	---	---	---	---
Toluene	0.074	---	---	---	---	0.16	0.11	---
Trichloroethene	1.5	0.94	0.28	1.3	---	9.0	5.0	0.031
Xylenes (total)	---	---	---	---	---	---	---	---

^a Indicates below reporting limit

* Indicates top of 0.5 foot sample interval

EXHIBIT 9 cont.

SUMMARY OF VOLATILE ORGANIC COMPOUNDS DETECTED
IN SOIL SAMPLES COLLECTED IN THE VICINITY
OF THE WASTE TREATMENT FACILITY
(ppm)

Compound	Boring: Depth* (feet):	HA-32	HA-33	HA-35	HA-36	HA-37	HA-38		
		6.5	6.5	3.0	8.5	2.5	8.0	10.0	10.0
1,1-Dichloroethane	---	---	---	---	---	---	---	---	---
1,2-Dichloroethene (total)	---	---	0.55	---	0.65	---	---	---	---
1,1,1-Trichloroethane	---	---	---	---	---	---	---	---	---
4-Methyl-2-pentanone	---	---	---	---	---	---	---	---	---
Acetone	---	---	---	---	---	---	---	---	---
Chlorobenzene	---	---	---	---	---	---	---	---	---
Tetrachloroethene	---	---	---	---	---	---	---	---	---
Tetrahydrofuran	---	---	---	---	---	---	---	---	---
Toluene	---	---	---	---	---	---	---	---	---
Trichloroethene	0.090	0.1	31	---	2.5	---	0.57	---	---
Xylenes (total)	---	---	---	---	---	---	---	---	---

a Indicates below reporting limit
* Indicates top of 0.5 foot sample interval

EXHIBIT 9 cont.

SUMMARY OF VOLATILE ORGANIC COMPOUNDS DETECTED
IN SOIL SAMPLES COLLECTED IN THE VICINITY
OF THE WASTE TREATMENT FACILITY
(ppm)

Compound	Boring: Depth* (feet):	HA-39	BH-1	BH-2	BH-3	BH-4	BH-5	BH-6
1,1-Dichloroethane		---	---	---	---	---	---	---
1,2-Dichloroethene (total)		---	---	---	---	---	---	---
1,1,1-Trichloroethane		---	---	---	---	---	---	---
4-Methyl-2-pentanone		---	---	---	---	---	---	---
Acetone		---	---	---	---	---	---	---
Chlorobenzene		---	---	---	---	---	---	---
Tetrachloroethene		---	---	0.047	---	---	---	---
Tetrahydrofuran		---	---	---	---	---	---	---
Toluene		---	0.033	0.025	---	0.026	0.15	---
Trichloroethene		---	0.076	0.038	0.15	0.076	0.040	---
Xylenes (total)		---	---	---	---	---	---	---

^a Indicates below reporting limit

* Indicates top of 0.5 foot sample interval
1128ADG3.tbl

CHEMICAL STORAGE BUNKER
SOIL SAMPLE LOCATIONS

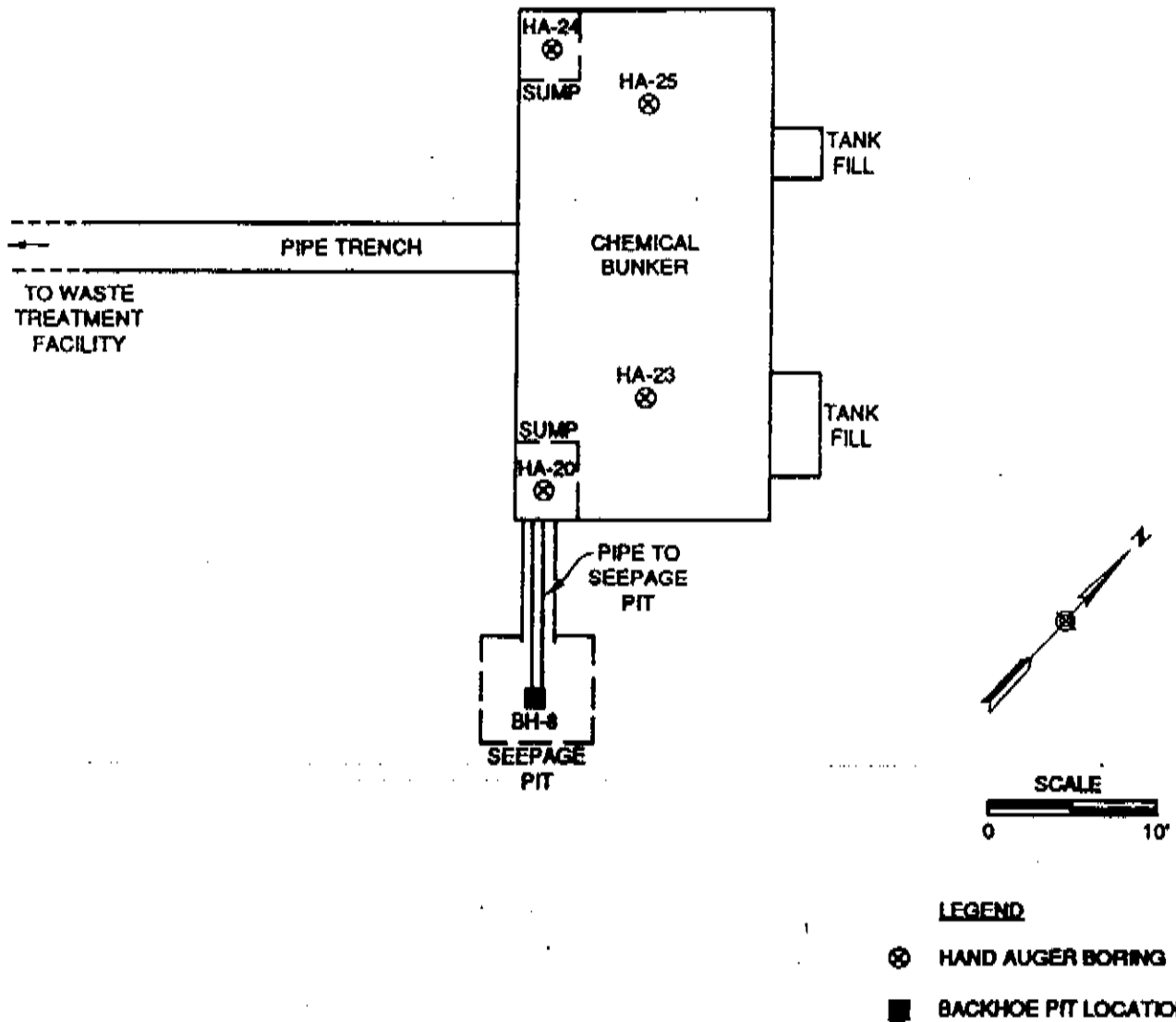


EXHIBIT 9 cont.

SUMMARY OF VOLATILE ORGANIC COMPOUNDS DETECTED (ppm) AND pH RESULTS IN SOIL SAMPLES COLLECTED IN THE VICINITY OF THE CHEMICAL STORAGE BUNKER

Parameter	Boring: Depth* (feet):	HA-20	HA-23	HA-24	HA-25	BH-8
		6.5	9.0	6.5	10.0	14.0
1,1-Dichloroethane		0.034	0.64	0.041	0.32	0.030 --- ^a
1,2-Dichloroethane		---	0.027	---	---	---
1,1-Dichloroethene		---	0.047	---	---	0.035 ---
1,2-Dichloroethene (total)		---	---	0.031	0.11	---
1,1,1-Trichloroethane		0.0064	2.5	---	---	0.86 0.088
1,1,2,-Trichloroethane		---	---	---	---	0.065 ---
Acetone		0.68	---	---	---	0.280
Methylene Chloride		---	19	---	---	0.89 1.0
Trichloroethene		---	0.069	---	---	0.085 0.038
Toluene		---	0.16	0.46	0.084	0.52 0.26
pH		9.6	7.2	7.4	6.9	4.4 7.7

^a Indicates below reporting limit.

* Indicates top of 0.5 foot sample interval

EXHIBIT 9 cont.

SUMMARY OF VOLATILE ORGANIC COMPOUNDS DETECTED (ppm) AND pH RESULTS IN SOIL SAMPLES COLLECTED IN THE VICINITY OF THE PIPE TRENCH

Compound	Boring: Depth*									
	(feet):									
	HA-22	HA-26		HA-27	HA-31	HA-34	HA-41	BKGD-3 ^a		
	9.0	3.5	11.0	9.0	3.0	6.5	6.0	3.5		
Trichloroethene	0.071	1.8	---	0.44	---	---	0.67	---		
Toluene	---	---	---	---	---	---	0.11	0.45		
pH	NA ^c	NA	NA	NA	NA	7.5	7.9	6.5		

- a Background Soil Sample - Phase III
- b Indicates below reporting limit.
- c Not analyzed
- * Indicates top of 0.5 foot sample interval

1128ADG3.tbl

EXHIBIT 9 cont.

SUMMARY OF CAN METALS DETECTED IN SOIL SAMPLES COLLECTED
IN THE VICINITY OF THE PIPE TRENCH

(ppm)

Parameter	Boring: HA-34		HA-41		BKGD-1 ^a		BKGD-2 ^a		BKGD-3 ^b		Regulated Limits ^c	
	Depth ^d (feet):		6.5	6.0	0.1	0.1	0.7	0.7	3.5	3.5	TTLC	STLC
Arsenic	---	---	1.6	---	---	---	---	---	1.8	---	500	5.0
Antimony	---	---	5.8	---	---	---	---	---	---	---	500	15
Barium	81	64	22	22	22	22	120*	110*	---	---	10,000	100
Chromium III	92	22	NA ^f	NA ^f	NA ^f	NA ^f	NA	NA	---	---	2,500	560
Chromium VI	---	---	---	---	---	---	NA	0.80	---	---	500	5.0
Chromium (Total)	---	---	---	---	23*	23*	81*	63*	---	---	500	5.0
Cobalt	---	---	---	---	11	11	17	---	---	---	8,000	80
Copper	26*	240*	28*	28*	28*	28*	24	21	---	---	2,500	25
Lead	---	720*	6.7*	6.7*	5.4*	5.4*	---	---	---	---	1,000	5.0
Mercury	---	---	---	0.53*	---	---	---	---	---	---	20	0.2
Nickel	71*	71*	18	59*	28*	28*	---	---	---	---	2,000	20
Vanadium	63*	29*	55*	74*	58*	58*	---	---	---	---	2,400	24
Zinc	34	60	57	31	41	41	---	---	---	---	5,000	250

a Background Soil Sample Phase I

b Background Soil Sample Phase III

c Regulated limits: Total Threshold Limit Concentration (TTLC) and Soluble Threshold Limit Concentrations (STLC)

d Indicates top of 0.5 foot sample interval

e Indicates below reporting limit

f Indicates not analyzed

* Above STLC below TTLC

EXHIBIT 10

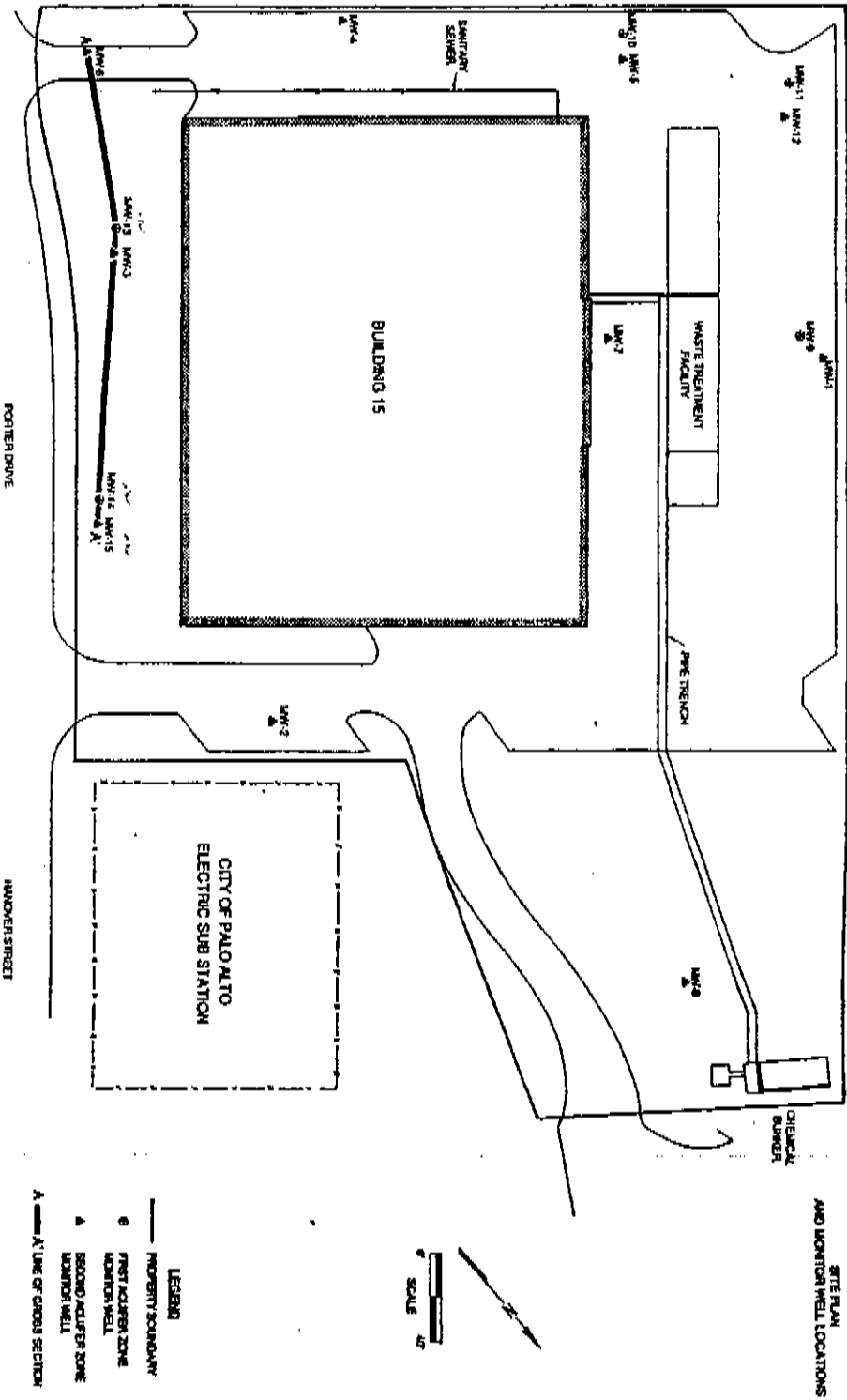


EXHIBIT 10 cont.

WATER QUALITY TEST RESULTS FOR MW-13, MW-14, AND
MW-15, PARTS PER BILLION

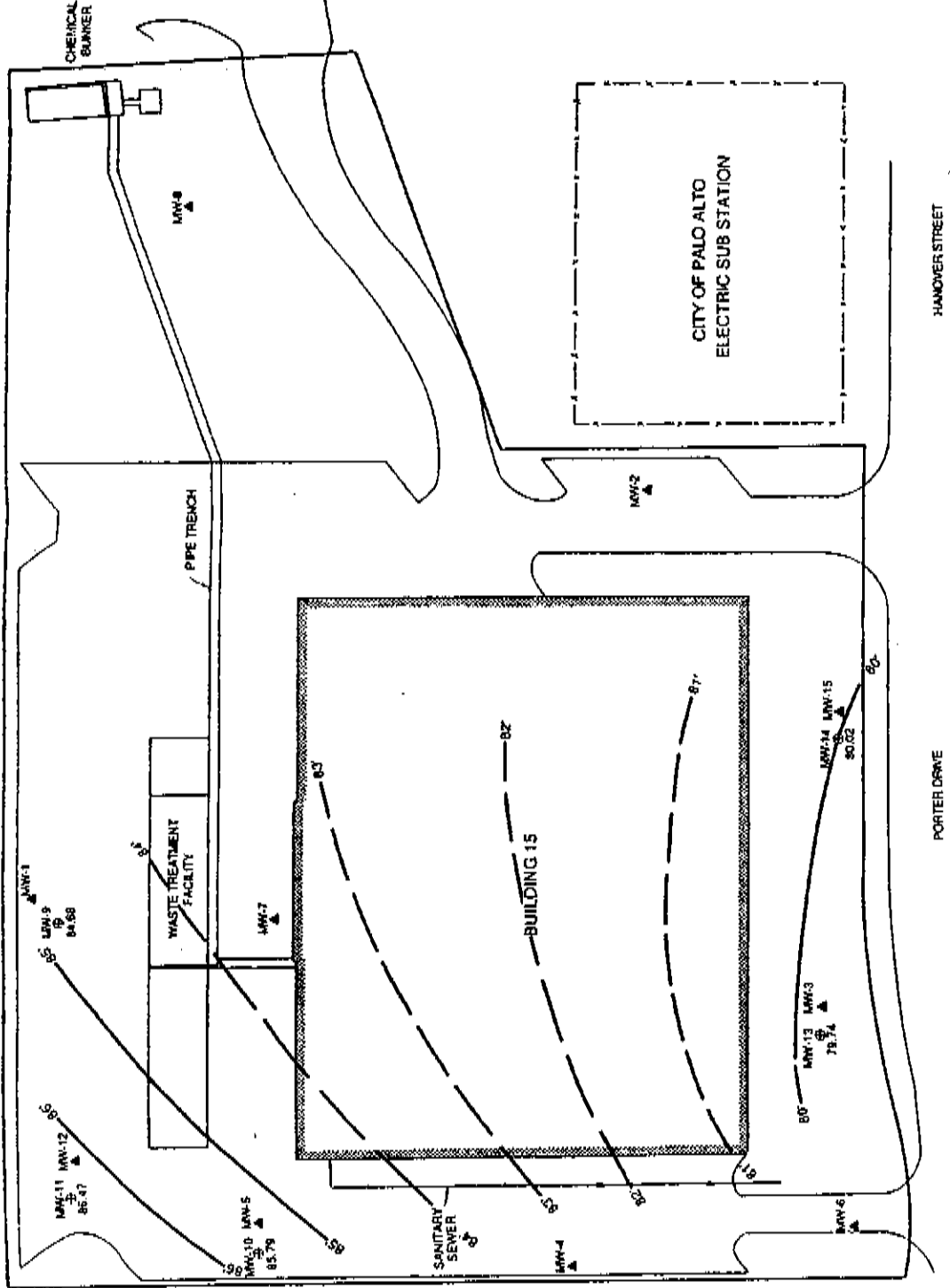
Well	MW-13		MW-14		MW-15	
Sample Date	7-29-88	8-5-88	7-29-88	8-5-88	8-1-88	8-5-88
Compound						
1,1,1-Trichloroethane	-- ^a	--	--	8.2	--	--
1,1-Dichloroethene	--	--	--	8.0	--	--
1,2-Dichloroethene (total)	--	--	--	9.6	--	--
Chloroform	--	--	--	60	--	--
Trichloroethene	450	390	3,700	4,200	--	--
Xylene (total)	--	--	--	--	--	6

^a Not Detected

8/8/16/88

EXHIBIT 11

GROUNDWATER SURFACE
ELEVATION CONTOURS (MSL)
FIRST AQUIFER ZONE
AUGUST 1, 1988



McLaren Environmental Engineering

APPENDIX G

- RI/FS WORKPLAN REQUIREMENTS

3.2.3 RI/FS Workplan Contents. The RI/FS Workplan shall be designed to meet the objectives in paragraph 3.2.2 of the Order and shall cover, at a minimum, each of the following elements:

a. Project Management Plan. A Project Management Plan which describes how the project will be managed by Respondent and its contractors, subcontractors and consultants including an organization chart with the names and titles of key personnel and a description of their individual responsibilities;

b. Scoping Document. A Scoping Document which consists of an evaluation of existing data and identification of the data needs and investigation tasks for the RIFS including, at a minimum, the following information:

(1) A map and description of known site characteristics, including topography, hydrogeology, buildings and structures and all other characteristics relevant to an evaluation of hazardous substance sources, pathways and receptors and potential impacts on health and the environment;

(2) A description of hazardous substance characteristics including:

(A) a list of all hazardous substances, materials or wastes which were disposed, discharged, spilled, treated, stored, transferred, transported, handled or used at the Site and a description of their estimated volumes, concentrations and characteristics;

(B) a description of all manufacturing processes which are or were related to each hazardous substance, material or waste or which produced any hazardous waste; and

(C) past disposal practices;

(3) A summary of all existing data including air, soil, surface water, and ground water data that has been previously generated and the QA/QC procedures which were followed;

(4) A description of the nature and extent of the release and/or threatened release, including a summary of actual and potential on-site and off-site health and environmental effects;

(5) A description of any previous response actions;

(6) An identification of the general types of response actions which will be evaluated in the feasibility study;

(7) An identification of all data gaps;

(8) Recommendations for all additional work needed to eliminate any data gaps.

(c) Sampling Plan. A Sampling Plan which describes the activities which will be undertaken to develop a complete profile of on-site and off-site air, soil, surface water and ground water contamination attributable to operations at the Site including, at a minimum, the following information:

- (1) The objectives of the investigation;
- (2) Identification of all chemical parameters which will be analyzed or tested;
- (3) A description of the types of samples which will be taken;
- (4) A map showing all locations which will be sampled;
- (5) A description of the depth and frequency of sampling at each location;
- (6) The engineering specifications for all sampling installations such as ground water monitoring wells, soil borings and piezometers;
- (7) Identification of all analytical procedures to be used; and
- (8) Provisions for obtaining access to and obtaining samples from adjacent properties, where appropriate;
- (d) Quality Control/Quality Assurance (QA/QC) Plan. A QA/QC Plan which describes the procedures for the collection, identification, preservation and transport of samples, the calibration and maintenance of instruments, and the processing, verification, storage and reporting of data, and including chain of custody procedures, identification of qualified person(s) conducting the sampling and of a laboratory certified or approved by the Department pursuant to Health and Safety Code Section 25198;
- (e) Data Management Plan. A Data Management Plan which describes how the data obtained pursuant to this Order will be managed and preserved by Respondent in accordance with paragraph 3.16;
- (f) Health and Safety Plan. A Site Health and Safety Plan which describes the specific personnel, procedures and equipment and covers all measures including contingency plans which will be taken during field activities to protect the health and safety of the workers at the Site, authorized representatives of the Department, and the general public from exposure to hazardous wastes, substances or materials.
- (g) Public Health and Environmental Evaluation Plan. A Public Health and Environmental Evaluation Plan which describes how the magnitude and probability of actual or potential harm to public health and welfare and the environment by the threatened and/or actual release of a hazardous substance will be determined and which describes the activities necessary to accomplish this task including:
 - (1) an evaluation of the results of the site investigation showing the actual and potential amounts and concentrations of hazardous substances in all relevant environmental media (air, water, soil, sediment and biota) at the conclusion of the remedial investigation and projected in the future;
 - (2) an assessment of the environmental fate and transport mechanisms for each hazardous substance within the relevant environmental media;
 - (3) identification of the hazardous and toxicological properties and relevant human health and environmental standards

and criteria for the hazardous substance(s) found in the site investigation;

(4) identification of all exposure pathways and the extent of actual and/or potential exposure;

(5) identification of the population(s) at risk; and

(6) an evaluation of the extent of expected harm and the likelihood of such harm occurring.

(h) Feasibility Study Plan. A Feasibility Study Plan which describes how the Feasibility Study will identify, develop and evaluate remedial action alternatives with respect to technical, public health, environmental, institutional, and cost considerations, and including, at a minimum, the following information:

(1) A summary of the existing and potential hazards for which corrective action may be required;

(2) A description of the alternative remedial actions which will be evaluated;

(3) A list of the technologies which will be screened for each alternative remedial action described in (2) above;

(4) A description of the public health, environmental and cost factors and criteria which will be considered in screening and analyzing each alternative remedial action technology, including, but not limited to, effectiveness, reliability, timeliness of implementation, unit cost, availability, operation and maintenance costs and conformity with applicable laws and regulations; and

(5) A description of all pilot studies, bench tests or other activities which will be performed to evaluate each alternative remedial action technology;

(6) A description of the federal and state environmental and public health requirements to be considered in developing the remedy.

(i) Other Activities. A description of any other significant activities not already addressed in the RI/FS Workplan and necessary to perform the RI/FS and submit the Remedial Investigation Report and Feasibility Study Report in compliance with paragraphs 3.2.4 and 3.2.5 of this Exhibit;

(j) Schedule. A schedule which provides specific time frames and dates for completion of each activity and report conducted or submitted under the RI/FS Workplan.

3.2.4. Remedial Investigation Report. The remedial investigation report shall be prepared and submitted by Respondent to the Department for review and approval in accordance with the approved RI/FS workplan schedule. The remedial investigation report shall summarize the results of the remedial investigation including reduction, presentation and interpretation of all data and information generated and/or compiled during the remedial investigation. The remedial investigation report shall cover the following subjects relating to the site:

APPENDIX G (cont.)

- a. Introduction
 - 1. Overview of Report
 - 2. Site Background Information
 - 3. Nature and Extent of Problem(s)
 - 4. Remedial Investigation Summary
- b. The Site Features Investigation
 - 1. Demography
 - 2. Land Use
 - 3. Natural Resources
 - 4. Climatology
- c. Hazardous Substance Investigation
 - 1. Waste Types
 - 2. Waste Component Characteristics and Behavior
- d. Hydrogeologic Investigation
 - 1. Soils
 - 2. Geology
 - 3. Ground Water
- e. Surface Water Investigation
 - 1. Surface Water
 - 2. Sediments
 - 3. Flood Potential
 - 4. Drainage
- f. Air Investigation
- g. Biota Investigation
 - 1. Flora
 - 2. Fauna
- h. Public Health and Environmental Evaluation Concerns
 - 1. Potential Receptors
 - 2. Public Health Impacts
 - 3. Environmental Impacts

3.2.5. Feasibility Study Report. The Feasibility Study Report shall be prepared and submitted by respondent to the Department for review and approval in accordance with the approved RI/FS workplan schedule. The Feasibility Study Report shall summarize the results of the feasibility study including reduction, presentation and interpretation of all data and information generated and/or compiled during the feasibility study. The feasibility study shall cover the following subjects relating to the Site.

- a. Description of Current Situation
 - 1. The Site Background Information
 - 2. Nature and Extent of Release
 - 3. Objective of Remedial Action(s)
- b. Description of Remedial Action Technologies
 - 1. Pilot Studies
 - 2. Bench Tests
- c. Screening of Remedial Action Technologies
 - 1. Technical Criteria
 - 2. Remedial Action Alternatives Developed
 - 3. Environmental and Public Health Criteria

APPENDIX G (cont.)

- 4. Other Screening Criteria
- 5. Cost Criteria
- d. Analysis of Remedial Action Alternatives
 - 1. Technical Feasibility
 - 2. Environmental Evaluation
 - 3. Institutional Requirements
 - 4. Public Health Evaluation
 - 5. Cost Analysis
- e. Recommended Remedial Action.

COMMUNITY RELATIONS PLAN PREPARATION

1. The plan will be prepared on the basis of a file review, site visit and in-person community interviews. The following types of individuals should be considered for interviewing:
 - a. Persons who have expressed interest in the site or may be directly affected by site problems (e.g., persons who have previously contacted DHS because of complaints about the site, nearby residents, property owners, etc.);
 - b. Local and state elected officials, such as the mayor, council members, county supervisors or state legislators;
 - c. Representatives of ad hoc citizen groups organized because of site issues;
 - d. Local business representatives (e.g., Chamber of Commerce), civic groups, neighborhood associations and local chapters of national environmental groups that have expressed interest in the site;
 - e. State or federal staff, such as environmental protection or natural resources department officials;
 - f. Staff at Congressional or State Legislators' District Offices;
 - g. County planning and health officials involved with the site.
2. Information obtained from these interviews will be used to develop the Community Relations Plan. The nature and level of citizen concern at the site will be evaluated by considering the presence or absence of the following six characteristics:
 - a. Children's health--whether families in the community believe their children's health may be affected by hazardous substances;
 - b. Economic loss--whether local homeowners or businesses believe that the site has caused or will cause them economic loss;
 - c. Agency credibility--whether DHS's performance and statements are viewed by the public as competent and credible;

- d. Involvement--whether an active, vocal group leader(s) has emerged from the community and whether the group leader has a substantial local following;
- e. Media--whether events at the site have received substantial coverage by local, state, regional or national media;
- f. Number affected--approximately how many households perceive themselves as affected by the site.

If several of these characteristics describe the affected community, assume that community interest and involvement at the site are likely to be high.

- 3. The DHS project manager or community relations coordinator must approve the list of persons to be interviewed and must be offered the opportunity to be present at any or all of the interviews. In contacting individuals, the Contractor must stress that the purpose of the interview is to assess the level and nature of community concerns so a community relations program appropriate to those concerns can be developed. Interviews should be conducted at the convenience of interviewees. Prior to the interviews, DHS will provide the Contractor with a list of interview questions to be asked during the discussions. These questions may include, but not be limited to the following:
 - a. When did you first become aware of the presence of hazardous substances at the site?
 - b. How would you characterize the problems at the site?
 - c. What are your major concerns related to the site?
 - d. What contacts have you had with local, state, federal and other officials about the site?
 - e. What activities have you participated in, sponsored or organized concerning the site?
 - f. How would you like to be involved in the cleanup process?
 - g. How can DHS best provide you with information concerning response activities? Would you like to be included on a mailing list?
 - h. What kind of information would be most useful to you (e.g., technical information or status reports on cleanup activities)? How frequently would you like to receive a progress report or fact sheet?

- i. What local or regional media best cover the area? What coverage have they given the site?
 - j. Is there anything you wish to mention that we have not yet discussed?
 - k. Can you suggest other individuals or groups that DHS should contact for additional information or to identify other types of concerns?
4. Draft plans will be submitted to the DHS project manager or community relations coordinator within _____ working days of the effective date of this order/task order. A final plan, incorporating DHS' review comments, will be prepared within _____ working days of the receipt of the comments.

OUTLINE OF PLAN

- A. Introduction (1-2 pages). This section will include:
1. Purpose of the Community Relations Plan (CRP);
 2. The roles of the public and CRP's in the remediation process;
 3. Which agencies have oversight responsibilities;
 4. How information was obtained (e.g., interviews, file review, etc.); note that a list of persons interviewed during plan preparation is included in Appendix A;
 5. How the plan is structured.
- B. Community Relations Background (3 to 7 pages). This section will include:
1. Site description, including area and site maps.
 2. Site history or background (basic historical and technical detail to clarify why the site was listed on the State Expenditure Plan list).
 - a. Site location and proximity to community and geographic landmarks (e.g., homes, schools, playground, businesses, lakes, streams);
 - b. History of site use and ownership;
 - c. Date and type of hazardous substance release(s);
 - d. Nature of threat to public health and the environment;

- e. History of inspections and studies conducted at the site;
- f. Current status.

3. History of Community Involvement

- a. Description of any past or ongoing community activities at the site.
- b. Description of interested citizens, groups and local officials their affiliations, addresses and phone numbers. See Appendix A of this section for list information.
- c. Concerns and issues identified by citizens, groups and local officials.
- d. Evaluation of the level of citizen concern.
- e. Brief description of any media coverage.
- f. Description of any other inquiries or concerns.

4. Potential issues and community concerns.

C. Objectives of the Community Relations Program (1 page).

This section will include objectives specific to public participation during the remedial response and special circumstances the plan will address.

D. Community Relations Techniques. This section will characterize the strategy for the community relations program at the site. Topics to be covered include:

- 1. Description of methods of communication or activities to be conducted;
- 2. Timing of these activities in relation to technical milestones; include a planning matrix at the end of this subsection (see item G);
- 3. Responsibility for implementation of these activities (DHS, Contractors, PRP's, etc.);
- 4. Resources to be used in the community relations program (e.g., local organizations, meeting places);
- 5. Areas of special sensitivity that must be considered when implementing this plan.

- E. Minimum Community Relations Requirements (California Health and Safety Code, Section 25356.1). At a minimum, the following techniques are required:
1. Identify an information repository to provide public access to reports, fact sheets and other project documents;
 2. Provide direct mail notification to contiguous property owners and affected local and state agencies of actions proposed in draft Remedial Action Plan (RAP);
 3. Provide a 30-day public comment period on the RAP;
 4. Publish notice of draft RAP availability for public review in a newspaper of general circulation in the area affected by the site;
 5. Hold one or more public meetings on the draft RAP;
 6. Post notices in the location of the proposed removal or remedy;
 7. Revise the draft RAP based on public comment.
- F. Staffing Plan and Budget. This section details the labor hours required for implementation of each activity by the responsible agency or organization and the expenses to be incurred. Expense estimates for travel, telephone, postage, reprographics, printing, display ad placement, word processing and graphics supplies will be included.
- G. Schedule. This will be a one-page matrix that relates timing of community relations activities to technical milestones for the site.
- H. Appendix A. Mailing List. The list will include names, titles, addresses and telephone numbers of all officials and group representatives contacted during the community interviews (indicated with asterisks *) and others who should receive regular information about site developments. Because the community relations plan is a public document, the telephone numbers and addresses of non-officials and non-affiliated individuals contacted for interviews will not be included as part of the plan that is made publicly available. The contacts identified in the appendix should include the following:
1. Contiguous property owners;
 2. Federal, state and local elected officials (include county and city or township);

3. Environmental and citizens groups;
4. DHS officials (include all departments involved in the remedial process, e.g., Sanitary Engineering Branch, Epi Studies, Community Relations);
5. Local, state and federal environmental officials;
6. Local health department officials;
7. Press contacts (newspapers, radio, television).

I. Appendix B. Meeting Locations and Information Repositories.
This appendix will identify suitable locations for holding public meetings and making public information easily accessible to community members.

Repository hours and contact names for both repositories and meeting places should also be included.

June 29, 2001



Hewlett-Packard Company
1501 Page Mill Road
Palo Alto, CA 94304

Ms. Janet Naito
Site Mitigation Branch
California Environmental Protection Agency
Department of Toxic Substances Control (DTSC)
700 Heinz Avenue, Suite 200
Berkeley, California 94710-2737

**SEMI-ANNUAL STATUS REPORT FOR HEWLETT-PACKARD COMPANY BUILDING 15
AND 28 SITES, PALO ALTO, CALIFORNIA**

Dear Ms. Naito:

Hewlett-Packard Company (HP) is pleased to submit this Semi-Annual Status Report for the 3215 Porter Drive Study Area (the Building 15 Site), which includes the HP Building 15 facility located at 3215 Porter Drive in Palo Alto, California, and the former HP Buildings 28A, B, and C (the Building 28 Site) located at the corner of Page Mill Road and Porter Drive in Palo Alto, California. This Semi-Annual Status Report is submitted pursuant to the Remedial Action Orders (the Orders) issued for each Site by the California EPA, Department of Toxic Substances Control (DTSC). Docket No. HSA 88/89-024 was issued for the Building 15 Site on March 29, 1989 and amended on July 31, 1995. Docket No. 90/91-007 was issued for the Building 28 Site on October 25, 1990 and amended on June 30, 1995.

This Semi-Annual Status Report presents a discussion of the activities performed and operational data obtained during the period of December 2000 through May 2001. Also included is a description of activities which have been or are expected to be conducted during the next reporting period. The next progress report which will be included in the Annual Monitoring Report for 2001, will cover the period of June 1 through November 30, 2001. Activities for both Sites are discussed together because operation and maintenance of the remedial systems are being undertaken as a single project.

WORK COMPLETED BETWEEN DECEMBER 1ST 2000 AND MAY 31ST, 2001

GROUNDWATER MONITORING

Groundwater levels were measured at the monitoring wells, extraction wells, and piezometers shown on Tables 1 and 2, for the Building 15 and 28 Sites, respectively, on May 7, 2001. Well construction details for monitoring wells, extraction wells, and piezometers in each aquifer zone and calculated groundwater elevations

for the May 2001 sounding event for the Buildings 15 and 28 Sites are presented in the attached Tables 1 and 2, respectively. As requested by DTSC in their letter dated March 22, 2001, depth to water measurements, rather than the midpoint between the on and off set points, are reported in Tables 1 and 2 for the extraction wells. Table 3 provides the pump intake depth and on and off set points for each extraction well.

May 2001 water level data for the Building 15 Site were generally consistent with historical water level data collected when the extraction system was operating in its current configuration, indicating the extraction system continues to operate effectively and capture VOC-affected groundwater within the Building 15 Site boundary. As a result of lowering the on and off set points in response to the March 22, 2001 DTSC letter, water levels measured in May 2001 in extraction wells SC1-3 and SC1-17 were approximately 5 and 8 feet lower than those recorded in May 2000. Lowering of the potentiometric surface in the vicinity of these two extraction wells is expected to further increase the capture area provided by the wells. A detailed capture area analysis will be included in the Annual Monitoring Report for 2001. May 2001 water level data for the Building 28 Site were consistent with historical water level data collected following shutdown of the extraction system in 1997.

Monitoring well MW-107, located at the Building 28 Site, was sampled on May 8, 2001. MW-107 was sampled in May 2001 to confirm an historical high detection in the well during the previous monitoring event in November 2000. The May 2001 test results for well MW-107 confirm the historical high detection, with trichloroethene (TCE) and 1,2-dichloroethene (1,2-DCE) detected at 100 parts per billion (ppb) and 28 ppb, respectively. An evaluation of the increasing chemical concentrations observed in this well will be included in the Annual Monitoring Report for 2001 (due to DTSC in January 2002). The analytical laboratory report are included as Attachment A.

OPERATION AND MAINTENANCE OF REMEDIAL SYSTEMS

Groundwater Extraction System

The groundwater extraction system for the Building 15 Site continued to operate throughout the reporting period. The groundwater extraction system at the Building 28 Site remained shut down throughout the reporting period in accordance with the trial shut down approved by DTSC in a letter dated April 15, 1997.

The following DTSC-approved modifications to the extraction system were made during the reporting period.

- On February 5, 2001, extraction well SC1-18 was removed from service to accommodate redevelopment activities at the 3333 Hillview Avenue property.
- On May 10, 2001, extraction well AL-6 was removed from service and the submersible pump removed to protect the down hole equipment during the in-situ chemical oxidation testing at the Building 15 Site.

- During the week of May 7, 2001, the on and off set points in extraction wells SC1-3 and SC1-17, located in the downgradient area of the Building 15 Site, were lowered 10 feet.

The objective of these adjustments is to expand the area of capture provided by these two wells in response to increasing VOC concentrations observed in downgradient monitoring well MSC1-2. As previously noted, the water levels in these two wells declined following these adjustments.

During the reporting period, a few brief unplanned shutdowns to portions of the Building 15 Site extraction system occurred as a result of mechanical or electrical malfunctions or leak detection alarms caused by accumulation of irrigation or rain water in below-grade vaults. In each of these incidents, the cause of the shutdown was identified, the problem mitigated, and the affected portion of the extraction system restarted. With two exceptions, these shut downs lasted less than 24 hours. In the event the unplanned shutdown resulted in downtime of more than 24 hours, the DTSC was notified of the situation. Incidents which resulted in downtime to portions of the extraction system or the entire extraction system for a period exceeding 24 hours and other major maintenance or repairs performed during the reporting period are described below.

- On December 14, 2000, extraction wells AL-3, AL-8, AL-9, SC1-9, and SC1-18 lost power due to Cupertino Electric disconnecting power to the wells. The affected wells were returned to service on December 20, 2000, when power was restored (Total of 6 days of downtime).

During the reporting period, Building 15 Site extraction wells produced a total of 2,585,811 gallons of groundwater at an average flow rate of 8.71 gallons per minute (gpm). Extraction volumes and average flow rates for individual wells and the combined extraction system during the past six months are shown in attached Table 4.

Groundwater Treatment System

The groundwater treatment system, which consists of three in-line liquid-phase granular activated carbon (GAC) vessels, continued to operate throughout the past six months, with only a few brief planned and unplanned shutdowns for maintenance and repair activities.

Between November 28, 2000 and June 4, 2001, the SCVWD flow meter installed at the treatment plant registered a total of 6,125,785 gallons of groundwater treated and subsequently discharged to a City of Palo Alto storm drain tributary to Matadero Creek. This total includes groundwater produced from the Building 15 Site, as well as the Teledyne site (3165 Porter Drive), the 3300 Hillview Avenue site, and the former Coherent site (3210 Porter Drive).

Treated groundwater was discharged to the storm drain, and subsequently to Matadero Creek, under the National Pollutant Discharge Elimination System (NPDES) General Permit (Order No. 99-051) (the "General Permit"). Analytical results indicated that all discharge parameters were within the limits specified in the General Permit. The results from the December sampling event were reported in the Annual NPDES Self-

Monitoring Report, dated January 30, 2001. The results from the January, February, and March 2000 sampling events were reported in the First Quarter 2001 NPDES Self-Monitoring Report, dated April 27, 2001. Results from the April and May 2001 sampling events will be reported in the Second Quarter 2001 NPDES Self-Monitoring Report, scheduled to be submitted to the RWQCB and DTSC on or before July 31, 2001.

OFF-SITE CONNECTIONS TO TREATMENT SYSTEM

Treatment of extracted groundwater from the three off-site connections (the Teledyne site, the former Coherent site, and the 3300 Hillview Avenue site) continued throughout the reporting period.

WORK PLANNED FOR JUNE THROUGH NOVEMBER 2001

GROUNDWATER MONITORING

Groundwater monitoring at Building 15 and Building 28 will be performed in November 2001 in accordance with the current DTSC-approved routine monitoring program.

OPERATION AND MAINTENANCE OF REMEDIAL SYSTEMS

Routine O&M activities for the remedial systems, including monitoring in accordance with operational permits, will continue throughout the next semi-annual reporting period. Extraction well SC1-18 should be brought back on-line during the next reporting period. Resuming extraction from well AL-6 will be dependent on the findings of the in-situ chemical oxidation pilot study. Recommendations for operation of well AL-6 will be included in Annual Monitoring Report for 2001 (due to DTSC in January 2002).

OFF-SITE CONNECTIONS TO TREATMENT SYSTEM

Treatment of extracted groundwater conveyed from the three off-site parties is expected to continue throughout the next semi-annual reporting period.

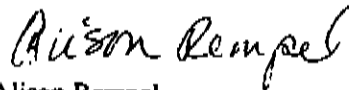
IN-SITU CHEMICAL OXIDATION PILOT STUDY

SECOR began the implementation of the in-situ chemical oxidation pilot study at the Building 15 Site on May 29, 2001. Permanganate injections were completed on June 7, 2001. Post-injection groundwater monitoring, as described in the DTSC-approved Work Plan, will be performed throughout the next reporting period. The results of the pilot study, including recommendations for extraction well AL-6, will be included in the Annual Monitoring Report for 2001 (due to the DTSC in January 2002).

Please contact me at (650) 857-5290 if you have any questions regarding this report.

Sincerely,

Hewlett-Packard Company



Alison Rempel

Project Manager

cc: Building 15 and 28 Mailing List

Attachments

Table 1 Well and Piezometer Construction Details and Groundwater Surface Elevations - Building 15 Site

Table 2 Well and Piezometer Construction Details and Groundwater Surface Elevations - Building 28 Site

Table 3 Pump Intake and On and Off Set Point Depths for Extraction Wells

Table 4 Groundwater Extraction Rates and Volumes for December 2000 through June 2001

Attachment A Groundwater Sampling Analytical Laboratory Report for Well MW-107

Building 15 and 28 Mailing List

TABLE 1
SUMMARY OF GROUNDWATER ELEVATIONS
 Second Quarter 2001
 Hewlett-Packard Company, Building 15 Site, Palo Alto, California

Well	TOC Elevation [msl]	Top of Screen Elevation [msl]	Bottom of Screen Elevation [msl]	Depth to Water [ft] 5/7/01	Groundwater Elevation [msl] 5/7/01
Alluvium Zone					
AL-1	94.33	76.30	66.30	23.76	70.57
AL-2	88.10	72.10	57.10	23.45	64.65
AL-3	93.75	74.80	64.80	24.76	68.99
AL-5	94.36	80.50	70.50	22.45	71.91
AL-6	95.87	73.90	68.90	NM	NM
AL-7	117.77	78.80	68.80	40.06	77.71
AL-8	91.45	76.50	61.50	19.33	72.12
AL-9	99.76	77.80	67.80	29.42	70.34
MW-8	115.82	82.20	72.20	37.19	78.63
MW-9	100.06	84.80	74.80	19.99	80.07
MW-14	97.56	82.90	67.90	20.08	77.48
MW-16	98.06	77.00	67.00	20.11	77.95
MW-17	99.10	80.20	75.20	19.97	79.13
MW-22	96.26	79.00	74.00	19.37	76.89
MW-23	99.86	78.50	73.50	23.73	76.13
MW-26	101.17	77.10	71.10	NM	NM
MW-28	97.65	82.80	72.80	20.19	77.46
MW-31	99.24	84.90	78.90	19.13	80.11
MW-32	129.02	85.00	75.00	49.19	79.83
MW-34	94.50	77.80	70.80	19.27	75.23
MW-36	97.92	74.90	70.20	23.81	74.11
MW-40	96.53	74.00	64.00	22.64	73.89
MW-47	98.98	82.00	78.00	20.87	78.11

TABLE 1
SUMMARY OF GROUNDWATER ELEVATIONS
 Second Quarter 2001
 Hewlett-Packard Company, Building 15 Site, Palo Alto, California

Well	TOC Elevation [msl]	Top of Screen Elevation [msl]	Bottom of Screen Elevation [msl]	Depth to Water [ft] 5/7/01	Groundwater Elevation [msl] 5/7/01
Santa Clara Zone 1					
MSC1-1	94.25	62.30	52.30	23.03	71.22
MSC1-2	94.26	62.30	52.30	25.30	68.96
MSC1-3	104.31	52.30	42.30	27.95	76.36
MW-1	100.42	55.70	45.70	20.58	79.84
MW-2	97.45	58.30	48.30	19.59	77.86
MW-4	100.13	60.40	50.40	24.60	75.53
MW-5	101.14	58.50	48.60	20.00	81.14
MW-6	99.07	59.60	49.60	23.05	76.02
MW-10	101.30	75.70	65.70	NM	NM
MW-11	101.71	76.00	66.00	NM	NM
MW-15	97.47	62.70	52.70	20.45	77.02
MW-18	100.68	67.10	60.10	21.51	79.17
MW-24	95.86	69.30	62.30	19.72	76.14
MW-29	103.52	64.10	57.60	23.88	79.64
MW-30	103.41	82.90	77.90	24.11	79.30
MW-33	116.14	71.50	64.50	36.00	80.14
MW-35	94.95	49.20	39.20	19.88	75.07
MW-39	99.15	68.60	61.60	22.38	76.77
MW-41	101.09	52.10	42.10	24.93	76.16
MW-43	96.58	43.10	33.10	21.78	74.80
MW-46	97.89	65.40	60.40	24.08	73.81
MW-48	112.02	77.40	67.40	36.08	75.94
MW-76	128.51	53.00	48.50	65.30	63.21
SC1-1	98.68	56.70	36.70	24.00	74.68
SC1-2	95.34	62.70	37.70	20.02	75.32

TABLE 1
SUMMARY OF GROUNDWATER ELEVATIONS
 Second Quarter 2001
 Hewlett-Packard Company, Building 15 Site, Palo Alto, California

Well	TOC Elevation [msl]	Top of Screen Elevation [msl]	Bottom of Screen Elevation [msl]	Depth to Water [ft] 5/7/01	Groundwater Elevation [msl] 5/7/01
SC1-3	93.59	57.60	52.60	28.51	65.08
SC1-4	91.76	47.80	37.80	15.77	75.99
SC1-5	106.38	67.40	57.40	31.53	74.85
SC1-6	95.74	55.70	45.70	35.41	60.33
SC1-7	96.60	33.60	23.60	22.40	74.20
SC1-8	97.45	68.50	58.50	20.89	76.56
SC1-9	94.92	58.90	33.90	31.17	63.75
SC1-10	94.98	67.00	57.00	NM	NM
SC1-11	96.81	69.80	44.80	32.00	64.81
SC1-16	96.52	50.50	35.50	32.09	64.43
SC1-17	91.37	57.40	52.40	32.82	58.55
SC1-18	102.61	64.20	59.20	27.48	75.13
SC1-19	99.64	64.30	54.30	35.67	63.97
Santa Clara Zone 2					
MSC2-1	96.75	22.80	17.80	23.36	73.39
MW-12	101.54	52.00	42.00	22.25	79.29
MW-19	100.15	9.60	.40	16.21	83.94
MW-20	100.20	21.60	11.60	16.53	83.67
MW-21	98.81	28.20	21.20	21.86	76.95
MW-42	112.33	56.30	46.30	37.34	74.99
MW-50	100.56	.80	-4.20	16.41	84.15
SC2-1	95.57	15.60	4.60	12.04	83.53
SC2-2	91.24	11.20	6.20	16.57	74.67
SC2-3	95.79	33.80	18.80	22.32	73.47
SC2-4	98.45	38.50	28.50	23.30	75.15
SC2-5	92.47	18.40	11.40	22.79	69.68

TABLE 1
SUMMARY OF GROUNDWATER ELEVATIONS
 Second Quarter 2001
 Hewlett-Packard Company, Building 15 Site, Palo Alto, California

Well	TOC Elevation [msl]	Top of Screen Elevation [msl]	Bottom of Screen Elevation [msl]	Depth to Water [ft] 5/7/01	Groundwater Elevation [msl] 5/7/01
Santa Clara Zone 3					
MW-49	96.15	-38.60	-48.60	12.97	83.18

Notes:

(1) Elevations are given in feet above Mean Sea Level (msl).

Abbreviations:

TOC = top of casing

Dry = indicates that the well contained no measurable water on that date

NM = water level was not measured

NA = Not Applicable/Available

TABLE 2
SUMMARY OF GROUNDWATER ELEVATIONS
 Second Quarter 2001
 Hewlett-Packard Company, Building 28 Site, Palo Alto, California

Well	TQC Elevation [msl]	Top of Screen Elevation [msl]	Bottom of Screen Elevation [msl]	Depth to Water [ft] 5/7/01	Groundwater Elevation [msl] 5/7/01
Alluvium Zone					
AL-10	123.30	75.30	65.30	38.06	85.24
AL-11	103.16	83.10	73.10	17.51	85.65
AL-12	103.69	83.70	68.70	18.16	85.53
AL-13	104.45	84.00	64.00	18.60	85.85
AL-14	104.97	85.00	60.00	18.17	86.80
AL-16	109.07	93.00	68.00	17.21	91.86
MW-2	114.77	92.80	87.80	NM	NM
MW-3	107.30	84.20	74.20	18.63	88.67
MW-4	112.71	91.40	76.40	21.01	91.70
MW-9	108.54	76.60	66.60	20.22	88.32
MW-10	117.98	94.60	84.60	NM	NM
MW-12	122.88	90.60	80.60	28.10	94.78
MW-13	109.06	89.90	84.90	23.15	85.91
MW-74	124.31	90.60	85.96	30.72	93.59
MW-82	128.11	92.00	82.00	35.11	93.00
Santa Clara Zone 1					
MW-1	123.73	94.00	88.00	21.65	102.18
MW-5	113.92	88.60	83.60	22.09	91.83
MW-6	115.24	81.40	76.40	22.70	92.54
MW-7	112.54	52.40	42.40	21.11	91.43
MW-8	108.50	49.00	39.00	23.02	85.48
MW-11	119.48	94.30	84.30	26.34	93.14
MW-14	129.82	88.30	76.30	41.89	87.93
MW-75	131.14	78.40	70.70	39.16	91.98

TABLE 2
SUMMARY OF GROUNDWATER ELEVATIONS
 Second Quarter 2001
 Hewlett-Packard Company, Building 28 Site, Palo Alto, California

Well	TOC Elevation [msl]	Top of Screen Elevation [msl]	Bottom of Screen Elevation [msl]	Depth to Water [ft] 5/7/01	Groundwater Elevation [msl] 5/7/01
MW-83	129.83	97.10	87.10	33.91	95.92
MW-106	128.52	74.00	64.00	32.83	95.69
SC1-12	108.66	58.70	33.70	17.00	91.66
SC1-13	103.94	38.90	23.90	19.40	84.54
SC1-14	103.36	45.40	25.40	18.69	84.67
SC1-15	123.80	53.80	38.80	38.87	84.93
Deeper Santa Clara					
MW-15	112.62	17.00	7.00	17.50	95.12
MW-17	108.76	18.00	10.00	19.60	89.16
MW-107	128.30	35.60	25.10	35.40	92.90
MW-108	131.38	58.20	47.70	51.70	79.68

Notes:
 (1) Elevations are given in feet above Mean Sea Level (msl).

Abbreviations:
 TOC = top of casing
 Dry = indicates that the well contained no measurable water on that date
 NM = water level was not measured
 NA = Not Applicable/Available

TABLE 3
PUMP INTAKE AND ON AND OFF SET POINT DEPTHS
Hewlett-Packard Company
Building 15 and 28 Sites, Palo Alto, California

Well	Site	High Level Sensor (ft BTOC)	Low Level Sensor (ft BTOC)	Pump Intake (ft BTOC)	TOC Elevation (ft msl)	High Level Sensor Elevation (ft msl)	Low Level Sensor Elevation (ft msl)	Pump Intake Elevation (ft msl)
AL-1	15	24.03	24.96	30.00	94.33	70.30	69.37	64.33
AL-2	15	27.24	28.40	34.00	88.10	60.86	59.70	54.10
AL-3	15	24.27	27.17	32.50	93.75	69.48	66.58	61.25
AL-5	15	21.75	23.45	28.50	94.36	72.61	70.91	65.86
AL-6	15	24.40	25.25	25.25	95.87	71.47	70.62	70.62
AL-7	15	40.28	42.50	49.50	117.77	77.49	75.27	68.27
AL-8	15	27.40	28.68	33.50	91.45	64.05	62.77	57.95
AL-9	15	29.74	30.88	36.00	99.76	70.02	68.88	63.76
AL-10	28	54.25	55.75	62.00	123.30	69.05	67.55	61.30
AL-11	28	27.00	28.50	34.00	103.16	76.16	74.66	69.16
AL-12	28	30.75	31.75	38.00	103.69	72.94	71.94	65.69
AL-13	28	37.25	38.25	44.50	104.45	67.20	66.20	59.95
AL-14	28	44.75	45.75	52.00	104.97	60.22	59.22	52.97
AL-15	28	39.75	40.75	47.00	109.07	69.32	68.32	62.07
SC1-2	15	25.62	27.14	40.70	95.34	69.72	68.20	54.64
SC1-3	15	33.00	36.00	41.00	93.59	60.59	57.59	52.59
SC1-6	15	35.14	38.35	44.00	95.74	60.60	57.39	51.74
SC1-7	15	30.00	33.35	68.00	96.60	66.60	63.25	28.60
SC1-8	15	32.54	35.66	34.00	97.45	64.91	61.79	63.45
SC1-9	15	23.05	34.97	NA	97.45	74.40	62.48	NA
SC1-11	15	31.68	45.31	45.64	96.85	65.17	51.54	51.21
SC1-12	28	39.50	42.00	55.00	108.66	69.16	66.66	53.66
SC1-13	28	38.00	41.00	70.00	103.94	65.94	62.94	33.94
SC1-14	28	37.75	41.50	43.00	103.36	65.61	61.86	60.36
SC1-15	28	53.50	56.50	75.00	123.28	69.78	66.78	48.28
SC1-16	15	30.71	34.52	51.00	96.52	65.81	62.00	45.52
SC1-17	15	33.00	36.00	39.00	91.37	58.37	55.37	52.37
SC1-18	15	33.50	37.00	44.00	102.61	69.11	65.61	58.61
SC1-19	15	38.29	38.95	40.00	97.39	59.10	58.44	57.39
SC2-1	15	81.50	84.50	86.00	95.57	14.07	11.07	9.57
SC2-3	15	21.33	24.87	67.00	95.79	74.46	70.92	28.79
SC2-5	15	21.48	24.56	82.50	92.47	70.99	67.91	9.97

Notes:

(1) a bold well name indicates that the well is an active extraction well

Abbreviations:

15 = Hewlett-Packard Building 15 Site well

28 = Hewlett-Packard Building 28 Site well

High Level Sensor = water level at which well pump will turn on

Low Level Sensor = water level at which well pump will turn off

Pump Intake = level of well pump water intake

ft BTOC = feet below top of casing

ft msl = feet above mean sea level

NA = not applicable

TABLE 4
GROUNDWATER EXTRACTION VOLUMES
FOR DECEMBER 2000 THROUGH JUNE 2001
Hewlett-Packard Company
Building 15 and 28 Sites, Palo Alto, California

WELL NUMBER	WELL LOCATION (1)	DATE	METER READINGS (gallons)	SEMI-ANNUAL FLOW VOLUME TOTALS (gallons)	ESTIMATED AVERAGE FLOW RATE (gallons per minute) (2)
AL-1	15	11/27/00 06/21/01	647,351 770,545	123,194	0.49
AL-2	15	11/27/00 06/21/01	296,047 541,538	245,491	0.97
AL-3	15	11/27/00 06/21/01	847,757 821,850	74,093	0.28
AL-5	15	11/27/00 06/21/01	292,842 373,772	80,930	0.32
AL-6	15	11/27/00 06/21/01	251,363 276,504	25,141	0.10
AL-7	15	11/27/00 06/21/01	592,843 663,476	70,633	0.28
AL-8	15	11/27/00 06/21/01	326,389 925,337	598,948	2.55
AL-9	15	11/27/00 06/21/01	649,252 699,994	50,742	0.20
AL-10	28	11/27/00 06/21/01	873,654 873,654	0	0.00
AL-11	28	11/27/00 06/21/01	55,654 55,654	0	0.00
AL-12	28	11/27/00 06/21/01	232,935 232,935	0	0.00
AL-13	28	11/27/00 06/21/01	35,568 35,568	0	0.00
AL-14	28	11/27/00 06/21/01	657,214 657,215	1	0.00
AL-15	28	11/27/00 06/21/01	367,516 367,517	1	0.00
SC1-2	15	11/27/00 06/21/01	420,918 470,310	49,382	0.20
SC1-3	15	11/27/00 06/21/01	410,647 552,589	141,942	0.56
SC1-6	15	11/27/00 06/21/01	909,231 994,712	85,481	0.34
SC1-7	15	11/27/00 06/21/01	330,306 700,992	370,686	1.47
SC1-8	15	11/27/00 06/21/01	123,858 199,768	75,910	0.30
SC1-9	15	11/27/00 06/21/01	40,277 46,421	6,144	0.02
SC1-11	15	11/27/00 06/21/01	530,436 704,061	173,625	0.69
SC1-12	28	11/27/00 06/21/01	206,657 206,557	0	0.00
SC1-13	28	11/27/00 06/21/01	84,739 84,739	0	0.00
SC1-14	28	11/27/00 06/21/01	667,680 667,680	0	0.00
SC1-15	28	11/27/00 06/21/01	395,741 395,741	0	0.00
SC1-16	15	11/27/00 06/21/01	554,086 618,477	64,391	0.26
SC1-17	15	11/27/00 06/21/01	490,987 517,530	26,543	0.11
SC1-18	15	11/27/00 06/21/01	476,441 483,307	6,886	0.03
SC1-19	15	11/27/00 06/21/01	728,177 791,706	63,529	0.25

TABLE 4
GROUNDWATER EXTRACTION VOLUMES
FOR DECEMBER 2000 THROUGH JUNE 2001
Hewlett-Packard Company
Building 15 and 28 Sites, Palo Alto, California

WELL NUMBER	WELL LOCATION (1)	DATE	METER READINGS (gallons)	SEMI-ANNUAL FLOW VOLUME TOTALS (gallons)	ESTIMATED AVERAGE FLOW RATE (gallons per minute) (2)
SC2-3	15	11/27/00 06/21/01	872,312 948,120	73,808	0.29
SC2-5	15	11/27/00 06/21/01	154,770 333,090	178,320	0.71
Treatment System	NA	11/28/00 06/04/01	56,889,415 62,815,200	6,125,785	24.31

Notes:

(1) Well location designates between Building 15 Site wells and Building 28 Site wells.

(2) Flow rates were calculated by dividing the total flow volume by the estimated actual period of operation, taking into account periods when the GWET system was turned off.

(3) Represents adjusted Semi-Annual Flow Volume Total due to meter rollover (The difference between the Maximum Totalizer Meter reading and the Initial Totalizer Meter reading, plus the Final Totalizer Meter reading).

ATTACHMENT A

**Groundwater Sampling
Analytical Laboratory Report for Well MW-107**

Secor -Field Office
1501 Page Mill Road, MS5UE
Palo Alto, CA 94304

Attn.: Craig Pon

Project: 006.03855
HP Building 15&28

Attached is our report for your samples received on Friday May 11, 2001
This report has been reviewed and approved for release. Reproduction of this report
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after June 25, 2001
unless you have requested otherwise. We appreciate the opportunity to be of service to you.
If you have any questions, please call me at (925) 484-1919. You can also contact me via email.
My email address is: asalimpour@chromalab.com

Sincerely,



Afsaneh Salimpour

Halogenated Volatile Organic Compounds by 8021

Secor -Field Office

☒ 1501 Page Mill Road, MS5UE
Palo Alto, CA 94304

Attn: Craig Pon

Phone: (650) 857-3084 Fax: (650) 813-3644

Project #: 006.03855

Project: HP Building 15&28

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
T0501-MW107	Water	05/08/2001 13:49	1

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-05-0216

To: Secor -Field Office

Test Method: 8021B

Attn.: Craig Pon

Prep Method: 5030B

Halogenated Volatile Organic Compounds by 8021

Sample ID:	T0501-MW107	Lab Sample ID:	2001-05-0216-001
Project:	006.03855 HP Building 15&28	Received:	05/11/2001 18:07
Sampled:	05/08/2001 13:49	Extracted:	05/16/2001 14:54
Matrix:	Water	QC-Batch:	2001/05/16-01.25
Sample/Analysis Flag o (See Legend & Note section)			

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Dichlorodifluoromethane	ND	2.0	ug/L	2.00	05/16/2001 14:54	
Vinyl chloride	ND	1.0	ug/L	2.00	05/16/2001 14:54	
Chloroethane	ND	1.0	ug/L	2.00	05/16/2001 14:54	
Trichlorofluoromethane	ND	1.0	ug/L	2.00	05/16/2001 14:54	
1,1-Dichloroethene	ND	1.0	ug/L	2.00	05/16/2001 14:54	
Methylene chloride	ND	10	ug/L	2.00	05/16/2001 14:54	
trans-1,2-Dichloroethene	ND	1.0	ug/L	2.00	05/16/2001 14:54	
cis-1,2-Dichloroethene	28	1.0	ug/L	2.00	05/16/2001 14:54	
1,1-Dichloroethane	ND	1.0	ug/L	2.00	05/16/2001 14:54	
Chloroform	ND	1.0	ug/L	2.00	05/16/2001 14:54	
1,1,1-Trichloroethane	ND	1.0	ug/L	2.00	05/16/2001 14:54	
Carbon tetrachloride	ND	1.0	ug/L	2.00	05/16/2001 14:54	
1,2-Dichloroethane	ND	1.0	ug/L	2.00	05/16/2001 14:54	
Trichloroethene	100	1.0	ug/L	2.00	05/16/2001 14:54	
1,2-Dichloropropane	ND	1.0	ug/L	2.00	05/16/2001 14:54	
Bromodichloromethane	ND	1.0	ug/L	2.00	05/16/2001 14:54	
2-Chloroethylvinyl ether	ND	1.0	ug/L	2.00	05/16/2001 14:54	
trans-1,3-Dichloropropene	ND	1.0	ug/L	2.00	05/16/2001 14:54	
cis-1,3-Dichloropropene	ND	1.0	ug/L	2.00	05/16/2001 14:54	
1,1,2-Trichloroethane	ND	1.0	ug/L	2.00	05/16/2001 14:54	
Tetrachloroethene	ND	1.0	ug/L	2.00	05/16/2001 14:54	
Dibromochloromethane	ND	1.0	ug/L	2.00	05/16/2001 14:54	
Chlorobenzene	ND	1.0	ug/L	2.00	05/16/2001 14:54	
Bromoform	ND	4.0	ug/L	2.00	05/16/2001 14:54	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2.00	05/16/2001 14:54	
1,3-Dichlorobenzene	ND	1.0	ug/L	2.00	05/16/2001 14:54	
1,4-Dichlorobenzene	ND	1.0	ug/L	2.00	05/16/2001 14:54	
1,2-Dichlorobenzene	ND	1.0	ug/L	2.00	05/16/2001 14:54	
Trichlorotrifluoroethane	ND	4.0	ug/L	2.00	05/16/2001 14:54	
Chloromethane	ND	2.0	ug/L	2.00	05/16/2001 14:54	
Bromomethane	ND	2.0	ug/L	2.00	05/16/2001 14:54	
Surrogate(s)						
1-Chloro-2-fluorobenzene	102.1	70-130	%	2.00	05/16/2001 14:54	

1220 Quarry Lane * Pleasanton, CA 94566-4756

Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

To: Secor -Field Office

Test Method: 8021B

Attn.: Craig Pon

Prep Method: 5030B

Batch QC Report

Halogenated Volatile Organic Compounds by 8021

Method Blank

Water

QC Batch # 2001/05/16-01.25

MB: 2001/05/16-01.25-002

Date Extracted: 05/16/2001 11:51

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Dichlorodifluoromethane	ND	1.0	ug/L	05/16/2001 11:51	
Vinyl chloride	ND	0.5	ug/L	05/16/2001 11:51	
Chloroethane	ND	0.5	ug/L	05/16/2001 11:51	
Trichlorofluoromethane	ND	0.5	ug/L	05/16/2001 11:51	
1,1-Dichloroethene	ND	0.5	ug/L	05/16/2001 11:51	
Methylene chloride	ND	5.0	ug/L	05/16/2001 11:51	
trans-1,2-Dichloroethene	ND	0.5	ug/L	05/16/2001 11:51	
cis-1,2-Dichloroethene	ND	0.5	ug/L	05/16/2001 11:51	
1,1-Dichloroethane	ND	0.5	ug/L	05/16/2001 11:51	
Chloroform	ND	0.5	ug/L	05/16/2001 11:51	
1,1,1-Trichloroethane	ND	0.5	ug/L	05/16/2001 11:51	
Carbon tetrachloride	ND	0.5	ug/L	05/16/2001 11:51	
1,2-Dichloroethane	ND	0.5	ug/L	05/16/2001 11:51	
Trichloroethene	ND	0.5	ug/L	05/16/2001 11:51	
1,2-Dichloropropane	ND	0.5	ug/L	05/16/2001 11:51	
Bromodichloromethane	ND	0.5	ug/L	05/16/2001 11:51	
2-Chloroethylvinyl ether	ND	0.5	ug/L	05/16/2001 11:51	
trans-1,3-Dichloropropene	ND	0.5	ug/L	05/16/2001 11:51	
cis-1,3-Dichloropropene	ND	0.5	ug/L	05/16/2001 11:51	
1,1,2-Trichloroethane	ND	0.5	ug/L	05/16/2001 11:51	
Tetrachloroethene	ND	0.5	ug/L	05/16/2001 11:51	
Dibromochloromethane	ND	0.5	ug/L	05/16/2001 11:51	
Chlorobenzene	ND	0.5	ug/L	05/16/2001 11:51	
Bromoform	ND	2.0	ug/L	05/16/2001 11:51	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	05/16/2001 11:51	
1,3-Dichlorobenzene	ND	0.5	ug/L	05/16/2001 11:51	
1,4-Dichlorobenzene	ND	0.5	ug/L	05/16/2001 11:51	
1,2-Dichlorobenzene	ND	0.5	ug/L	05/16/2001 11:51	
Trichlorotrifluoroethane	ND	2.0	ug/L	05/16/2001 11:51	
Chloromethane	ND	1.0	ug/L	05/16/2001 11:51	
Bromomethane	ND	1.0	ug/L	05/16/2001 11:51	
Surrogate(s)					
1-Chloro-2-fluorobenzene	91.3	70-130	%	05/16/2001 11:51	

To: Secor -Field Office

Test Method: 8021B

Attn: Craig Pon

Prep Method: 5030B

Batch QC Report

Halogenated Volatile Organic Compounds by 8021

Laboratory Control Spike (LCS/LCSD)		Water		QC Batch # 2001/05/16-01.25	
LCS:	2001/05/16-01.25-003	Extracted:	05/16/2001 12:36	Analyzed	05/16/2001 12:36
LCSD:	2001/05/16-01.25-004	Extracted:	05/16/2001 13:22	Analyzed	05/16/2001 13:22

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
1,1-Dichloroethene	19.4	18.1	20.0	20.0	97.0	90.5	6.9	70-130	20		
Trichloroethene	21.1	19.3	20.0	20.0	105.5	96.5	8.9	70-130	20		
Chlorobenzene	20.4	18.8	20.0	20.0	102.0	94.0	8.2	70-130	20		
Surrogate(s)											
1-Chloro-2-fluorobenzene	22.9	22.9	20	20	114.5	114.5		70-130			

To: Secor -Field Office

Test Method: 8021B

Attn: Craig Pon

Prep Method: 5030B

Legend & Notes

Halogenated Volatile Organic Compounds by 8021

Analysis Flags

0

Reporting limits were raised due to high level of analyte present in the sample.

SECOR

Chain-of-Custody Number:

[illegible]

BUILDINGS 15 AND 28 MAILING LIST

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1274 Terra Bella Avenue
Mountain View, CA 94039-7127

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David Chalton
Barron Park Association
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Doris Maez
Environmental Protection Coordinator
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P.O. Box 10250
Palo Alto, CA 94304

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c/o Mr. John Joynt
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Trent Weise
SECOR International Incorporated
1225 Pear Avenue, Suite 110
Mountain View, CA 94043

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

REGION 2
700 HEINZ AVE., SUITE 200
BERKELEY, CA 94710-2737
(510) 540-3724



July 31, 1995

CERTIFIED MAIL

Ms. Kathy Herzing
Hewlett-Packard Company
1501 Page Mill Road, M/S 5U-E
Palo Alto, California 94304

Ms. Paula Kakimoto
The Board of Trustees for the
Leland Stanford Junior University
c/o Stanford Management Company
2770 Sand Hill Road
Menlo Park, California 94025

Dear Ms. Herzing and Ms. Kakimoto:

HEWLETT PACKARD BUILDING 15 SITE, ORDER NO. HSA 88/89-024
3215 PORTER DRIVE, PALO ALTO, CALIFORNIA - AMENDMENT

As the Site is entering into the Operation and Maintenance phase, it is necessary to update the Site Order. This letter serves to modify the subject Order to include the Department's requirements for Operation and Maintenance activities at the Site and to update/clarify sections in the existing Order.

1. Section 1.2 of the Order is replaced with the following:
"1.2. Site. The Site which is the subject of this Order is located at 3215 Hillview Avenue, Palo Alto, California. The Study Area includes the Site and downgradient affected areas. The downgradient extent of the Study Area includes areas impacted by the Site that are not subject to Orders issued to other adjacent Sites. A map of the Site and 3215 Porter Drive Study Area is attached as Attachment 1."
2. Sections 3.2, 3.2.1, 3.2.2, 3.2.3, and Sections 3.3, 3.3.1, 3.3.2 and 3.3.3 of the Order are deleted.



3. Section 3.4 is replaced with the following:

"3.4 Public Participation.

3.4.1. The Respondents shall work cooperatively with the Department in ensuring that the affected public and community continue to be involved in the Department's decision-making process for the Site. Any such public participation activities shall be conducted in accordance with the February 1992 Public Participation Plan for the Hillview Porter site or subsequent amendments as approved by the Department, the Department's Public Participation Policy and Guidance Manual, and with the Department's review and approval.

3.4.2. Respondents shall develop and submit site-specific fact sheets to the Department when required under the Public Participation Plan for the Site or when specifically requested by the Department. Respondents will be responsible for distribution of fact sheets using the approved mailing list upon Department approval. In addition, Respondents will be responsible for submittal of documents to the information repositories listed in the above Public Participation Plan. Public notices and meetings may be required based on community needs and site activities."

4. Section 3.5.4 of the Order is replaced with the following:

"3.5.4. Implementation of Operation and Maintenance Manual.

Respondents shall implement the Operation and Maintenance Manual (O&MM) dated October 31, 1994, as revised on May 31, 1995 and any approved modifications thereto. This implementation will include the operation and maintenance of the approved final remedial actions for the Site."

5. Section 3.5.5 of the Order is replaced with the following:

"3.5.5. Changes During Operation and Maintenance of the Final RAP

3.5.5.1 Respondents shall give the Department at least sixty (60) days advance written notice prior to the intended date of any significant or non-routine proposed modification, discontinuation or disruption of the groundwater extraction, conveyance and treatment system and/or the air injection and soil vapor extraction, conveyance and treatment system. Significant actions are actions which will have a significant effect on the system, such as expansion of the system, deletion of components

from the system, pulsed pumping, or cessation of pumping from selected wells. Minor adjustments to system flow rates are not significant actions. The written notice shall be sent to the Department at the address set out in Paragraph 3.10 of this Order in a manner that produces a record of the sending of the notice such as certified mail, overnight delivery service, facsimile transmission or courier hand delivery service. The written notice to the Department shall include: a detailed description of the work to be done or modifications to be made; a map showing the exact location of the proposed work; and the reasons for the proposed modification, disruption or discontinuation. The provisions of this Paragraph 3.5.5.1 shall not apply to modifications, discontinuances or other disruptions of the above systems which are undertaken by the Respondents in compliance with Paragraph 3.8.5 or 3.14, which are authorized by the Department under Paragraph 3.5.6, or which are required by the Department under Paragraph 3.5.5.2.

3.5.5.2 The Department may require modification, replacement, or additions to the remediation facilities if those facilities are not achieving remediation objectives or protecting public health and safety or the environment. The Department may require additional evaluations, designs and the construction and operation of the remediation facilities to achieve these objectives."

6. Section 3.5.6 of the Order is replaced with the following:

3.5.6. Discontinuation of Remedial Technology. The groundwater extraction, conveyance and treatment system and the air injection, soil vapor extraction and treatment system shall be left in place and operated by Respondents until and except to the extent that the Department authorizes Respondents in writing to discontinue, move or modify some or all of the systems because the Respondents have met the cleanup goals for the site, or because the modification would better achieve the cleanup goals, or because the remediation system could not achieve the cleanup goals and other cleanup methods will be implemented or it has been demonstrated, to the Department's satisfaction, that the maximum achievable cleanup has occurred. Tables of the cleanup levels for the volatile organic compounds (VOCs) in groundwater and soil set forth in the RAP are attached as Attachment 2."

7. Section 3.8 of the Order is replaced with the following:

"3.8 Reporting Requirements.

3.8.1. Quarterly Summary Reports. Respondents shall submit Quarterly Summary Reports of its activities under the provisions of this Order. The report shall describe a) specific actions taken by or on behalf of Respondents during that quarter; b) all planned activities for the next quarter; c) any requirements under this Order that were scheduled for completion during the quarter that were not completed; d) any problems encountered or anticipated in complying with this Order; and e) analytical result (laboratory reports) from samples required by the Department which are not a part of the routine quarterly monitoring or NPDES sampling for the Site. Additionally, the quarterly report must contain information required in the Department's letter of February 6, 1995, as amended by the Department for the Site (see Attachment 3). The reporting timeframes for the quarterly reports will be as follows: December through February, March through May, June through August, and September through November. The quarterly reports shall be received by the Department by the last working day of the month following the end of the quarter. For those quarters where semiannual reports are submitted, the quarterly reports may be incorporated into the semiannual report. During years when an annual report is required, the quarterly report summarizing the last quarter of the year may be submitted concurrent with the annual report.

3.8.2. Semiannual Reports. Respondents shall submit Semiannual Reports of its activities under the provisions of this Order on January 15 and June 30. The January 15 semiannual report may be combined with the annual report. This report shall include a) the information required in the quarterly reports; b) discussion of sample results; c) isoconcentration maps; and d) all field sampling forms, chain-of-custody forms and laboratory analysis reports. Additionally the semiannual reports must contain information required in the Department's February 6, 1995 letter (as amended by the Department for the Site) (see Attachment 3).

3.8.3. Annual Reports. Respondents shall submit an annual report which includes a performance review for the remedial actions implemented documenting progress towards achieving remediation goals. This report must contain the information required in the Department's letter of June 10, 1994 (Attachment 4). The annual report shall be due annually on January 15 and shall cover activities for the previous year.

3.8.4. Five Year Review. Respondents shall review and reevaluate the remedial action after a period of five (5) years from the completion of construction and startup and every 5 years thereafter. The review and reevaluation shall be conducted pursuant to Section 121(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. 9601 et seq., as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986, Pub. L. 99-499. Within ninety (90) calendar days before the end of the 5 year period, Respondents shall submit a remedial action review workplan to the Department for review and approval. Upon the Department's approval of the workplan, Respondents shall submit a report of the results of the remedial action review within the time set out in the approved workplan. The report shall analyze the results of sample analyses, test and other data generated or received by Respondents and evaluate the adequacy of the implemented remedy in protecting public health and safety and the environment. The first five-year review report is due on January 15, 1999.

3.8.5. Emergency Response Action/Notification. In the event of any emergency action or occurrence (such as a fire, earthquake, explosion, or human exposure to hazardous substances caused by the release or threatened release of a hazardous substance) during the course of this Order, Respondents shall immediately take all appropriate action to prevent, abate, or minimize such emergency, release, or immediate threat of release and shall immediately notify the Project Manager. Respondents shall take such action in consultation with the Project Manager and in accordance with all applicable provisions of this Order. Within seven days of the onset of such an event, Respondents shall furnish a report to the Department, signed by Respondents' Project Coordinator, setting forth the events which occurred and the measures taken in response thereto. In the event that Respondents fail to take appropriate response and the Department takes the action instead, Respondents shall be liable to the Department for all costs of the response action to the extent authorized by law. Nothing in this section shall be deemed to limit any other notification requirement to which the Respondents may be subject.

3.8.6. Other Agency Requirements. Respondents shall also comply with applicable permit reporting requirements issued by other agencies."

8. Section 3.10 of the Order is replaced with the following:

"3.10. Submittals. All submittals and notifications from Respondents that are required by this Order shall be sent simultaneously to:

Ms. Barbara J. Cook, P.E.
Regional Branch Chief
Attn: Janet Naito (2 copies)
Site Mitigation Branch
Department of Toxic Substances Control
700 Heinz Avenue, Suite 200
Berkeley, California 94710

Mr. Steven Ritchie
Executive Officer
Regional Water Quality Control Board
2101 Webster Street, Suite 500
Oakland, California 94612

Mr. Tom Iwamura
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118

9. Section 3.11 of the Order is replaced with the following wording:

"3.11. Communications. All approvals and decisions of the Department made regarding submittals and notifications will be communicated in writing by the Site Mitigation Branch Chief, Department of Toxic Substances Control or his/her designee. No informal advice, guidance, suggestions or comments by the Department regarding reports, plans, specifications, schedules or any other writings by Respondents shall be construed to relieve Respondents of the obligation to obtain such formal approvals as may be required. Confirmation of a designation shall be provided in writing by the Department in order to validate any approvals or decisions made by a Branch Chief's designee."

10. Section 3.12 of the Order is replaced with the following:

"3.12 Department Review and Approval. (a) If the Department determines that any report, plan, schedule or other document submitted to the Department for approval pursuant to this Order fails to comply with this Order or fails to protect public health and safety or the environment, the Department may: (1) modify the document as

deemed necessary and approve the document as modified; or (2) return comments to Respondents with recommended changes and a date by which Respondents must submit to the Department a revised document incorporating the recommended changes. (b) Any modifications, comments or other directive issued pursuant to (a) above, are incorporated into this Order. Any noncompliance with these modifications or directives shall be deemed a failure or refusal to comply with this Order."

11. Section 3.13 of the Order is replaced with the following wording to require compliance with local laws and regulations:

"3.13 Compliance with Applicable Laws. Respondents shall carry out this Order in compliance with all applicable local, state, and federal legal and regulatory requirements, including, but not limited to, requirements to obtain permits and to assure worker safety."

12. Section 3.14 of the Order is replaced with the following:

"3.14 Stop Work Order. In the event that the Department determines that any circumstances or activities (whether or not pursued in compliance with this Order) may pose an imminent or substantial endangerment to the health and safety of people on the site or in the surrounding area or to the environment, the Department may order Respondents to stop further implementation of this Order for such period of time as is needed to abate the endangerment. In the event that the Department determines that any activities (whether or not pursued in compliance with this Order) are proceeding without Department authorization, the Department may order Respondents to stop further implementation of this Order or of such activities for such period of time as is needed to obtain Department authorization, if such authorization is appropriate. Any deadline in this Order directly affected by a Stop Work Order, under this section, shall be extended for the term of the Stop Work Order."

13. Section 3.17. Sampling, Data and Document Availability. This section is modified to 1) require 7 days (instead of 5) advance notification of any non-routine field sampling; and 2) require preservation of all data, reports, and other documents by Respondents for a minimum of ten years (instead of six) after the conclusion of all activities under this Order.

Ms. Kathy Herzing
July 31, 1995
Page Eight

14. Section 3.20 of the Order is revised as follows:

"3.20. Incorporation of Plans and Reports. All plans, schedules, reports, specification and other documents that are submitted by Respondents pursuant to this Order are incorporated in this Order upon the Department's approval or as modified pursuant to Paragraph 3.12, Department Review and Approval, and shall be implemented by Respondents. Any noncompliance with such documents shall be a noncompliance with this Order."

15. Section 3.22 of the Order is revised to replace the last sentence with the following language: "Respondents shall comply with the new schedule, which is incorporated in this Order."

16. Section 3.23 of the Order is replaced with the following:

"3.23 Cost Recovery. Respondents are liable for all of the Department's costs incurred in responding to the contamination at the Site (including costs of overseeing response work performed by Respondents) to the extent authorized by law. Cost recovery may be pursued by the Department under CERCLA, Health and Safety Code section 25360, or any other applicable state or federal statute or common law."

If you have any questions, please contact Janet Naito at (510) 540-3833 or Mr. Derek Van Hoorn, Esq. at (916) 324-9930.

Sincerely,



Barbara J. Cook, P.E., Chief
Site Mitigation Branch

Certified Mail #P006762794
Certified Mail #P006762795

cc: See next page

Ms. Kathy Herzing
July 31, 1995
Page Nine

cc: Assemblyman Byron Sher
c/o Ms. Betsy Shotwell
702 Marshall Street, #290
Redwood City, California 94041

Supervisor Dianne McKenna
c/o Ms. Alice Sicular
70 West Hedding Street
San Jose, California 95110

Mr. Lee Esquibel
Santa Clara County
Dept./Environmental Health
P.O. Box 26070
San Jose, California 95159-6070

Mr. Habtemariam Kifle
S.F. Bay RWQCB
2101 Webster Street, #500
Oakland, California 94612

Mr. John Joynt
Barron Park Association Fdn.

FX-6 Personal Privacy

Mr. Bruce Scarborough
SEACOR
90 New Montgomery Street #620
San Francisco, California 94105

Mr. Tom Iwamura
Santa Clara Valley Water Dist.
5750 Almaden Expressway
San Jose, California 95118

Ms. Doris Maez
City of Palo Alto
250 Hamilton Avenue
Palo Alto, California 94301

Dr. Inge Harding-Barlow
Barron Park Association

FX-6 Personal Privacy

Ms. Marie Lacey
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, California 94105

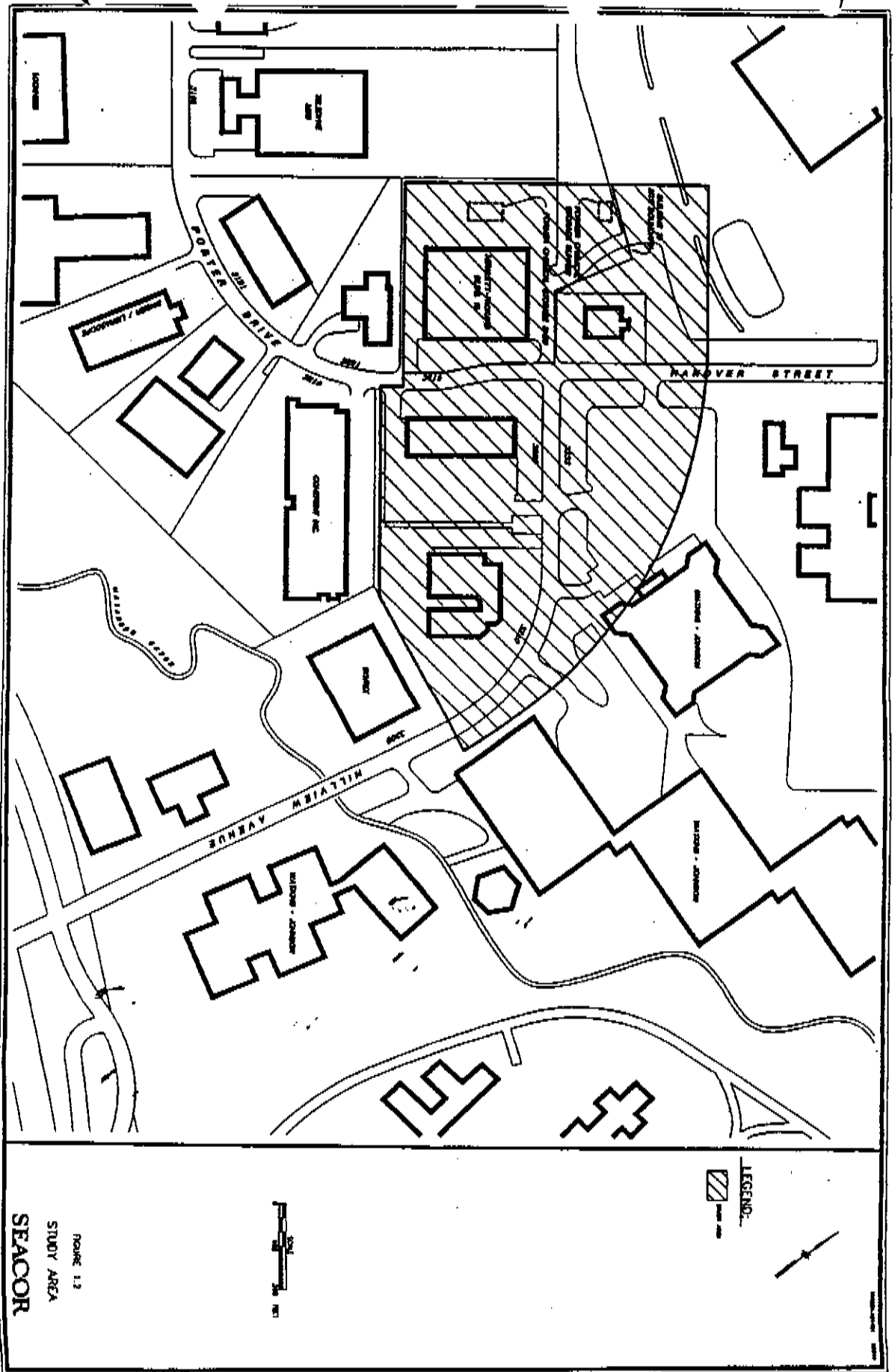
Mr. David Chalton, President
Barron Park Association

FX-6 Personal Privacy

Ms. Paula Kakimoto
Leland Stanford Jr. University
c/o Stanford Lands Management
2770 Sand Hill Road
Menlo Park, California 94025

ATTACHMENT

1



SEACOR
STUDY AREA
SCALE 1:2

ATTACHMENT

2

TABLE 2.1
GROUNDWATER REMEDIAL GOALS FOR THE STUDY AREA¹

COMPOUND	CALIFORNIA MCL (ug/L)	FEDERAL MCL (ug/L)
BENZENE	1	5
CARBON TETRACHLORIDE	5	5
CHLOROBENZENE	30	100
CHLOROFORM	100	100
1,1-DICHLOROETHANE	5	
1,1-DICHLOROETHYLENE	6	7
1,2-DICHLOROETHYLENE (TOTAL)	6*	-
1,2-DICHLOROPROPANE	5	-
ETHYL BENZENE	680	-
FREON 113	1200	
METHYLENE CHLORIDE	-	5
TETRACHLOROETHYLENE	5	5
TOLUENE	100**	-
1,1,1-TRICHLOROETHANE	200	200
TRICHLOROETHYLENE	5	5
XYLENES	1750	-

Source: California MCLs from 22 CCR 6444.5.
Federal MCLs from Federal Register 55:30865, July 27, 1990.
and Federal Register 57:31776, July 1992.

Note:

- ¹ The groundwater remedial goal is the more stringent of state and federal MCLs.
- * Drinking water standards for 1,2-dichloroethylene are for the cis isomer, the state and federal MCL for the trans isomer is 10 ppb.
- ** Toluene has no MCL. California Action Level listed here from DHS Technology and Risk Assessment Unit, July 1991.
- Indicates that no standard has been established.

TABLE 2.2

SOIL REMEDIATION GOALS¹

CHEMICALS	LOCATION SPECIFIC SOIL REMEDIATION GOALS	
	Chemical Storage Bunker (mg/kg)	Chemical Storage Shed (mg/kg)
ACETONE	64	21.39
CHLOROBENZENE	2	>0.037 ³
1,1-DICHLOROETHANE	0.299	0.078
1,1-DICHLOROETHYLENE	0.48	0.2
1,2-DICHLOROETHYLENE	0.427	0.167
METHYL ISOBUTYL KETONE	-	11.54
METHYLENE CHLORIDE	3.61	0.363
TETRACHLOROETHYLENE	-	>0.047 ³
TOLUENE	19000	3050
1,1,1-TRICHLOROETHANE	401	367
TRICHLOROETHYLENE	2.22	0.96

Notes: ¹ Soil remediation goals were derived from MYGRT2, which is a modelling tool used to predict transport of chemicals from soil to groundwater.

² Chemical compound not detected at this location.

³ The soil cleanup value presented is greater than the average of maximum concentrations detected in soil at this location. Based on this soil concentration, the concentration on groundwater at the property boundary will be approximately zero.

TABLE 4.1
SOIL REMEDIATION GOALS¹

CHEMICALS	CHEMICAL DILUTION PIT SOIL REMEDIATION GOALS
	Chemical Dilution Pit (mg/kg)
ACETONE	318.32
CHLOROBENZENE	²
1,1-DICHLOROETHANE	-
1,1-DICHLOROETHYLENE	-
1,2-DICHLOROETHYLENE	-
METHYL ISOBUTYL KETONE	-
METHYLENE CHLORIDE	0.21
TETRACHLOROETHYLENE	61.1
TOLUENE	154
1,1,1-TRICHLOROETHANE	-
TRICHLOROETHYLENE	1.26

Notes: ¹ Soil remediation goals were derived from MYGRT2, which is a modelling tool used to predict transport of chemicals from soil to groundwater.

² Chemical compound not detected at this location.

ATTACHMENT

3

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

REGION 2
700 HEINZ AVE., SUITE 200
BERKELEY, CA 94710-2737
(510) 540-3724



March 28, 1995

COPY

Ms. Kathy Herzing
Hewlett-Packard Company
1501 Page Mill Road, M/S 5U-E
Palo Alto, California 94304

Dear Ms. Herzing:

HEWLETT-PACKARD BUILDING 15 SITE, ORDER NO. HSA 88/89-024
HEWLETT-PACKARD BUILDINGS 28 A,B,C SITE, ORDER NO. HSA 90/91-007

DTSC has completed review of SECOR's February 27, 1995 letter proposing amendments to the proposed groundwater monitoring plan. Hewlett-Packard Company has requested the following modifications to the groundwater monitoring plan, consistent with DTSC's February 6, 1995 letter regarding the Hillview Porter Regional coordinated sampling program. These changes are approved.

1. Measurement of water levels in all wells on a quarterly basis, instead of monthly. These measurements shall be taken the first Monday of February, May, August and November. If Monday is a holiday, the water level elevations shall be measured on the Tuesday directly following. As adjacent Sites have not completed implementation of their final remedial actions, access should be provided to wells if these Sites need water elevation or chemistry data more frequently than collected by the Hewlett-Packard Building 15 or Buildings 28 A,B,C sites. DTSC may increase the sounding frequency in response to proposed changes to the final remedial action(s) or in response to changing Site conditions.
2. Modification of the reporting requirements to submit the information required in the quarterly reports on a semiannual basis. These reports shall be combined with the semiannual report to be submitted the last working day of June and with the annual report to be submitted by January 15.
3. Quarterly status reports, containing the information required in the monthly reports, shall be submitted quarterly by the last day of the months of March, June, and September and by January 15.



Ms. Kathy Herzing
March 28, 1995
Page Two

Hewlett-Packard Company has also requested modification of the sampling objectives for the quarterly, semiannual and annual groundwater sampling events. The Department concurs with these modifications. The primary objective of the quarterly sampling event will be to assess the potential concentrations changes or trends in the areas of highest trichloroethene (TCE) concentration within each respective flow zone. The additional objectives of the semiannual sampling event will be 1) to provide an adequate number of monitoring locations to enable the preparation of isoconcentration contour maps for each respective flow zone; 2) assess potential changes in plume boundaries; and 3) assess concentration trends in the interior portions of the 1,1-DCE plume in the saturated alluvium at the Building 15 Site. The additional objective of the annual sampling event will be to provide a comprehensive picture of the VOC distribution on an annual basis within each respective flow zone. The change in sampling objectives changed the sampling frequency established for many of the wells at each Site. The approved changes are outlined below by Site:

Hewlett-Packard Buildings 28 A,B,C Site

MW-4, MW-7, MW-8, MW-17, MW-74, MW-75, MW-107, and AL-10 will be sampled on a quarterly basis. If a sample cannot be collected from MW-4, extraction well AL-15 will be sampled quarterly.

MW-3, MW-9, MW-106, AL-13, SC1-13, and SC1-15 will be sampled on a semiannual basis. If a sample cannot be collected from MW-9, extraction well AL-14 will be sampled semiannually.

MW-5, MW-6, MW-10, MW-13, MW-14, MW-15, MW-82, MW-83, AL-11, AL-12, AL-14, AL-15, SC1-12, and SC1-14 will be sampled on an annual basis. If a sample cannot be collected from MW-10, MW-12 will be sampled annually.

MW-1, MW-2, ~~MW-11~~, MW-12, and MW-108 will be eliminated from the sampling program, although MW-12 will be sampled if a sample cannot be collected from MW-10 as part of the annual sampling event. Water elevation measurements will still be collected from these wells as part of the sounding program. MW-2 has been consistently dry since December 1993 and cannot be sampled. The remaining wells are eliminated as VOC levels have consistently either been non-detect or well below cleanup goals (MCLs) and there are other nearby wells which will provide water quality data at the plume boundaries.

Ms. Kathy Herzing
March 28, 1995
Page Three

Hewlett-Packard Building 15 Site

MW-10, EW-17, MW-18, MW-24, MW-25, MW-36, MW-50, MSC1-2, MSC2-1, AL-2, AL-5, SC1-3, SC1-10, SC1-11, SC2-3, and SC2-5 will be sampled on a quarterly basis.

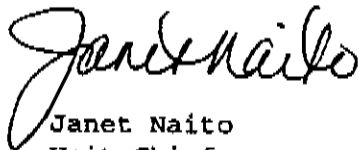
MW-1, MW-2, MW-6, MW-8, MW-11, MW-16, MW-28, MW-33, MW-34, MW-40, MW-46, MSC1-1, AL-3, AL-6, AL-7, AL-8, AL-9, SC1-1, SC1-2, SC1-6, SC1-7, SC1-8, SC1-17, SC1-18, and SC2-1 will be sampled on an semiannual basis.

MW-4, MW-5, MW-9, MW-12, MW-15, MW-19, MW-20, MW-21, MW-22, MW-23, MW-26, MW-29, MW-31, MW-32, MW-35, MW-39, MW-41, MW-43, MW-48, MW-49, MSC1-3, AL-1, SC1-4, SC1-5, SC1-9, SC1-16, SC2-2, and SC2-4 will be sampled on an annual basis.

MW-14, MW-30, MW-42, MW-47, and MW-76 will be eliminated from the sampling program, but will continue to be part of the sounding program. MW-47 and MW-30 have been consistently dry and cannot be sampled. MW-22 will provide water quality data for the area monitored by MW-14. MW-76 and MW-42 have VOC levels consistently either non-detect or well below cleanup goals (MCLs) and are not needed to define plume boundaries.

If you have any questions, please contact me at (510) 540-3833.

Sincerely,



Janet Naito
Unit Chief
Site Mitigation Branch

cc: See next page

Ms. Kathy Herzing
March 28, 1995
Page Four

cc: Assemblyman Byron Sher
c/o Betsy Shotwell
702 Marshall Street #290
Redwood City, California 94063

Supervisor Dianne McKenna
c/o Alice Sicular
70 West Hedding Street
San Jose, California 95110

Mr. Lee Esquibel
Santa Clara County
Dept./Environmental Health
P.O. Box 26070
San Jose, California 95159-6070

Mr. John Joynt
Barron Park Association Fdn.

FX-6 Personal Privacy

Dr. Inge Harding-Barlow
Barron Park Association

FX-6 Personal Privacy

Mr. Haptemarian Kifle
S.F. Bay RWQCB
2101 Webster Street, #500
Oakland, California 94612

Mr. Tom Iwamura
Santa Clara Vly Water
5750 Almaden Expressway
San Jose, California 95118

Ms. Doris Maez
City of Palo Alto
250 Hamilton Avenue
Palo Alto, California 94301

Ms. Paula Kakimoto
Stanford Management Company
2770 Sand Hill Road
Menlo Park, California 94025

Mr. Will Beckett, President
Barron Park Association

FX-6 Personal Privacy

Ms. Marie Lacey
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105

Mr. Bruce Scarborough
SECOR
90 New Montgomery Street #620
San Francisco, California 94105

FILE COPY

STATE OF CALIFORNIA — ENVIRONMENTAL PROTECTION AGENCY

PETE WILSON, Governor

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

REGION 2

700 HEINZ AVE., SUITE 200

BERKELEY, CA 94710-2737

(510) 540-2122



February 6, 1995

SAME LETTER SENT TO ATTACHED LIST

REVISED REPORTING REQUIREMENTS FOR SITES WITHIN THE HILLVIEW-PORTER REGION

The Department of Toxic Substances Control (DTSC) is providing the following guidance for the coordinated creek and groundwater monitoring programs being conducted at sites within the Hillview-Porter Region of the Stanford Research Park (SRP) in Palo Alto. This guidance applies to individual sites within the SRP, as well as to the Regional Site monitoring program. As these sites have or soon will have implemented final remedial actions, this guidance was developed to ensure consistency in the sampling and analysis procedures and reporting practices among sites. This letter supersedes and replaces the Department's April 13, 1990, letter.

The reporting timeframes for the quarterly reports will continue the current schedule as follows: December through February, March through May, June through August, and September through November.

The DTSC recognizes that each of the SRP sites, and the Regional site, may have specific issues related to data collection that will allow the use of schedules other than as outlined in the following sections. For instance, it may be appropriate for water levels to be collected on a quarterly basis, instead of a monthly basis, in some locations where the density of data collection points or where the data is sufficient to warrant variation from monthly monitoring. The following schedule will serve as the default monitoring program schedule unless DTSC has approved an alternative schedule for a particular site or the Regional program.

MONITORING REQUIREMENTS

All well locations and benchmarks in Matadero Creek used to measure surface water levels should be surveyed to the Santa Clara Valley Water District benchmark TBM-SYNTEX ("Square cut in



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Y903 3117

Same Letter Sent To Attached List
February 6, 1995
Page 2

upstream headwall, Matadero Creek and Hillview Avenue; elevation 85.01 MSL"). Well elevations, groundwater levels and surface water levels shall be presented in reports as relative to mean sea level (MSL). MSL is currently equivalent to NGVD, which is the datum used to survey all of the Santa Clara Valley Water District benchmarks.

Surface water elevations, if part of existing monitoring and/or Operation and Maintenance requirements, and groundwater elevations in all monitoring wells, extraction wells, and piezometers associated with each site investigation and the regional program shall be measured on the first Monday of each month, unless an alternative schedule has been approved by DTSC. If Monday is a holiday, the elevations shall be measured on the Tuesday directly following.

Designated monitoring and extraction wells shall be sampled quarterly unless DTSC has approved an alternative sampling schedule. This quarterly sampling shall take place during and be completed by the end of the first full week of the following four months February, May, August and November. Quarterly sampling performed as part of the Regional Program shall be completed by the end of the second week of each of the four months in which sampling occurs.

Designated monitoring and extraction wells must be sampled and analyzed using EPA Method 8010, modified to include analysis for cis- and trans-1,2-dichloroethene, and Freon 113 unless DTSC has approved an alternate analyze list. Additional analyses may be required by the Department, as appropriate. Additionally, the responsible parties (RPs) for all sites shall notify DTSC if the above sampling and analysis is inadequate to detect all known chemicals of concern for the site; additional analytical methods should be recommended/used to detect additional chemicals.

REPORTING REQUIREMENTS

Monthly Reports

Monthly summary reports shall be submitted to DTSC by the fifteenth day of the month following the month in which the work was accomplished. However, for those months where quarterly monitoring is reported, monthly reports may be incorporated into the quarterly reports. The monthly report shall include the following information:

1. Specific actions taken by or on behalf of the RPs during the previous month, actions expected to be undertaken during the current month, and planned activities for the next month.

Same Letter Sent To Attached List
February 6, 1995
Page 3

2. A discussion regarding operation of the final remedial action. This should include a discussion of problems encountered and how they were resolved. This should also include a discussion of operating parameters, such as extraction rates, flow rates, etc. Significant maintenance items must also be discussed.
3. Any requirements of the Order scheduled to be completed during the month that were not completed and any problems, or anticipated problems, with complying with the Order.
4. Boring logs for any soil borings, and well completion forms for wells installed.
5. Analytical results (laboratory reports) from any samples required by DTSC which were not a part of the routine quarterly monitoring, BAAQMD or NPDES sampling requirements.

Six months following the date of the Department's approval of the report documenting implementation and full operation of the final remedial action, the RP may request that the Department modify this reporting requirement to submit this information on a quarterly, rather than a monthly basis. This request must be in writing and provide sufficient documentation to demonstrate that the final remedial action is operating in a manner which would not require monthly reporting. If the Department determines that it is appropriate, the monthly reporting requirements may be modified to require this information on a quarterly basis and may be combined with the quarterly reports, as discussed below.

If the Department approves the quarterly submittal of this report, the Department will require implementation of the following procedures for reporting problems with the final remedial action implemented. Significant problems encountered should be discussed in the report required under this section. Generally, if the problem is repaired within 24 hours after discovery, ~~no~~ additional reporting will be required. The exception to this rule would be any break in the secondary containment, or a release from any component of the treatment system. If these problems occur or if any component of the extraction and/or treatment system will not be operating for greater than 24 hours after discovery, the RPs must notify the Department within 24 hours after discovery with the following information:

1. The type of problem and when it occurred
2. Steps taken to rectify the problem
3. The length of time required to resolve the problem
4. Steps taken to prevent reoccurrence

5. A schedule for bringing the component or system back on-line.

In the event of permit violations, the Department should be notified at the same time as the permitting agency.

QUARTERLY REPORTS

Quarterly reports shall be submitted to DTSC by the last day of the month following the month in which quarterly sampling was performed. The reports for the Regional monitoring program will be due 15 days following these dates. However, for those quarters when semi-annual reports are submitted, the quarterly reports may be incorporated into the semi-annual reports. The quarterly report for the November sampling event may be incorporated into the semi-annual/annual report.

The quarterly reports shall, at a minimum, contain the following information:

1. The information required for monthly reports, unless the monthly report is submitted separately.
2. Creek and monitoring well measurements. This shall include a table with the following information:
 - o Well number or stream measurement point number
 - o Top of casing elevation
 - o Screened interval/depth
 - o Zone screened (e.g., Qal, Qsc, shallow vs. deep, etc.)
 - o Date and time water level measurement was taken
 - o Depth to groundwater
 - o Groundwater and creek elevations
 - o Well volume calculation
 - o Time and date well or creek location was sampled
 - o Amount of water removed (identify whether well was dewatered)
 - o Record of parameters monitored during purging (i.e., pH, temperature, conductivity, turbidity).
3. Tables compiling sample results of all groundwater and surface water samples.
4. A very brief discussion of the sampling and analysis methodology and quality assurance/quality control measures taken.
5. Any deviations from the Quality Assurance Project Plan (QAPP) during this sampling event should be noted, along with the rationale for the change.

6. A brief discussion of the sample results. Any significant changes from previous sampling should be noted.
7. A brief discussion of significant trends noted in the groundwater elevations. Vertical and horizontal gradients should be discussed.
8. Groundwater contour maps for water bearing units beneath the site as specified by DTSC for the previous quarter. This will include maps for only the month in which chemical sampling occurred, unless otherwise required by DTSC. These groundwater contour maps should include data from adjacent sites, as appropriate.
9. A map showing all well and creek sampling locations.
10. A discussion of the influent and effluent monitoring data (including groundwater and/or vapor sample results) from the treatment systems collected as part of the final remedial action.
11. A section summarizing any violations of the NPDES requirements for those sites operating treatment systems with NPDES permits or interim authorization letters. This should include a table summarizing sample results for sampling conducted as part of NPDES permit violation corrective actions.

Following two quarters of sampling after the Department's approval of the report documenting implementation and full operation of the final remedial action, the RP may request that the Department modify this reporting requirement to submit this information on a semi-annual, rather than a quarterly basis. This request must be in writing and provide sufficient documentation to demonstrate that the final remedial action is operating in a manner which would not require quarterly reporting. If the Department determines that it is appropriate, the quarterly reporting requirements may be modified to require this information on a semi-annual basis, and may be combined with the semi-annual reports, as discussed below.

Semi-Annual Reports

Semi-annual reports shall be submitted on January 15 and June 30. The January 15 semi-annual report may be incorporate in the annual report (discussed below). The Regional semi-annual reports will be due January 30 and July 15. The following information is to be included in the semi-annual report:

1. All information required in the quarterly report.

2. A brief discussion of sample results, including significant changes from previous sampling episodes as well as significant trends noted. This discussion is not intended to be an evaluation of the effectiveness of remediation.
3. Isoconcentration maps for key chemicals and water bearing units beneath the site as specified by DTSC. The isoconcentration and groundwater contour maps (as specified for quarterly reports) must include data from adjacent sites, as appropriate. Isoconcentration maps will be generated for the most recent sampling event.
4. All field sampling forms, chain-of-custody forms and laboratory analysis reports should be included as appendices.

Annual Reports

The Department will require that each site conduct an annual performance review for their respective groundwater extraction and treatment systems. Annual reports shall be submitted to DTSC annually on January 15th, to allow incorporation of the November groundwater sampling data. The Regional annual reports shall be due January 30th. These reports may be combined with the November quarterly sampling report, as appropriate. A specific annual performance review will not be required every fifth year, as the above elements will be required, included and expanded upon in the mandatory five-year review. The need for annual reviews will be evaluated as part of the five-year review. The annual report must include the following information:

1. All information required in the semi-annual report.
2. An annual performance review for each site which has groundwater extraction and treatment systems, or other remedial systems. This review must include, at a minimum, the following information:
 - o An introduction which describes 1) the purpose of the report; 2) the location of the site and 3) a brief summary of the site history.
 - o A description of the remedial action(s) implemented.
 - o A description of significant problems encountered and significant adjustments made to the system(s) during the past year.
 - o Tables containing all of the required sampling and monitoring results for the year being reported, along

with a table containing the historical analytical data and figures(s) showing the monitoring and sampling locations.

- o A summary of the flow rates and operating pressures for each groundwater extraction well. The capture zones achieved by the groundwater extraction system should also be included.
- o Tables and/or figures illustrating the effectiveness of the treatment system (e.g., figures or tables showing carbon usage and the time for breakthrough).
- o A summary of documents submitted to other agencies to comply with permit requirements of the Regional Water Quality Control Board (RWQCB) or the Bay Area Air Quality Management District (BAAQMD). Any permit violations which occurred during the past year must be discussed, along with a description of the steps taken to return to compliance.
- o A description of any trends noted and significant anomalies identified should be included. Progress toward achieving remediation goals, including pounds of VOCs removed, should be reported. Data from the adjacent sites should be included and evaluated, as appropriate.
- o A description of the rationale for any proposed modifications to the system or the operation of the system, along with a proposed schedule for implementation of these modifications.

Regional Data Compilation and Evaluation Reports

The Hillview-Porter Regional Site Data Compilation and Evaluation (DC/E) Reports will be required once a year, to be submitted on April 15th. The DC/E report will be based on November sampling data and will be presented in the approved format for DC/E reports. The DC/E report may be incorporated into the Regional quarterly report that is due April 15th.

Data Distribution and Coordination

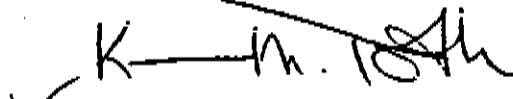
The RPs shall provide summary tables of the confirmed data generated from the water level measurements and from the sample analyses to each other within 5 working days upon request. In addition, copies of each site's quarterly, semi-annual, and annual reports shall be submitted to the regional consultant

Same Letter Sent To Attached List
February 6, 1995
Page 8

responsible for preparing the DC/E report at the same time of
submittal of these reports to DTSC.

We appreciate your cooperation in this manner. If you have
any questions, please contact the DTSC project manager for your
site.

Sincerely,


for Barbara J. Cook, P.E.,
Branch Chief
Site Mitigation Branch

cc: See Next Page

Same Letter Sent To Attached List
February 6, 1995
Page 9

cc: Supervisor Dianne McKenna
c/o Ms. Alice Sicular
70 West Hedding Street
San Jose, CA 95110

Mr. Lee Esquibel
Santa Clara County
Department of Environmental
Health
P.O. Box 26070
San Jose, CA 95159-6070

Mr. Habtemariam Kifle
Regional Water Quality Control
Board
2101 Webster Street, #500
Oakland, CA 94612

Dr. Inge Harding-Barlow
FX-6 Personal Privacy

Mr. John Joynt
Barron Park Association Fdn.
FX-6 Personal Privacy

Ms. Marianne Strickfaden
FX-6 Personal Privacy

Stanford Management Company
2770 Sand Hill Road
Menlo Park, California 94025
Attn: Paula Kakimoto

Mr. Tom Iwamura
Santa Clara Valley Water
District
5750 Almaden Expressway
San Jose, CA 95118

Ms. Doris Maez
City of Palo Alto
250 Hamilton Avenue
Palo Alto, CA 94301

Ms. Marie Lacey
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105

Mr. Arthur Bayce
FX-6 Personal Privacy

Mr. Will Beckett,
President
Barron Park Association
4189 Baker Avenue
Palo Alto, CA 94306

Assemblyman Byron Sher
c/o Ms. Betsy Shotwell
702 Marshall St. #290
Redwood City, CA 94063

SAME LETTER SENT TO THE FOLLOWING LIST

**Coherent, Inc. Site, 3210 Porter Drive, Palo Alto, California -
Order No. I/S&E 90/91-995**

**Coherent, Inc.
5100 Patrick Henry Drive
P.O. Box 54980
Santa Clara, California 95056-0980
Attn: Gregory M. Geary**

**Forensic Management Associates, Inc.
400 South El Camino Real
Suite 1050, 10th Floor
San Mateo, California 94402**

**Hewlett-Packard Building 15 Site, 3215 Porter Drive, Palo Alto,
California - Order No. HSA 88/89-024**

**Hewlett Packard Company
1501 Page Mill Road, M/S 5U-E
P.O. Box 10151
Palo Alto, California 94303-0889
Attn: Kathy Herzing**

**Hewlett Packard Buildings 28ABC Site, Corner of Page Mill Road
and Porter Drive, Palo Alto, California - Order No. HSA 89/90-007**

**Hewlett Packard Company
1501 Page Mill Road, M/S 5U-E
P.O. Box 10151
Palo Alto, California 94303-0889
Attn: Kathy Herzing**

**Kaiser Aerospace & Electronics Corporation
2710 Orchard Parkway
San Jose, California 95134
Attn: John Balkwill**

**Hillview-Porter Site, Palo Alto, California - Order No. HSA
88/89-012 (Amended December 19, 1994)**

**Mr. Peter Johnson
Johnson Associates
900 Galvin Drive
El Cerrito, California 94530**

Lockheed Building 255 Site, 3170 Porter Drive, Palo Alto,
California - Consent Order No. HSA 90/91-020

Lockheed Missiles & Space Company, Inc.
1111 Lockheed Way, O/47-10, B/101
Sunnyvale, California 94089-3504
Attn: Melissa Henck

SmithKline and French Laboratories Site, 3400 Hillview Avenue,
Palo Alto, California - Order No. HSA 88/89-005

General Instrument Corporation of Delaware
181 West Madison Avenue, 49th Floor
Chicago, Illinois 60602
Attn: Susan M. Meyer, Esq.

Gould, Inc.
35129 Curtis Boulevard
East Lake, Ohio 44095
Attn: Craig Bush

Monsanto Company
800 N. Lindbergh Boulevard, G4WM
St. Louis, Missouri 63167
Attn: Mike Foresman

SmithKline Beecham Corporation
709 Swadeland Road
P.O. Box 1539
King of Prussia, Pennsylvania 19406
Attn: Monica Harper Alston

Syntex Site, 3300 Hillview Avenue, Palo Alto, California - Order
No. HSA 90/91-003

HM Holdings, Inc.
c/o Lempres & Wulfsberg
Kaiser Center
300 Lakeside Drive, 24th Floor
Oakland, California 94612-3524
Attn: Mathew D. Lempres, Esq.

Syntex (U.S.A.) Inc. (representing Syntex (U.S.A.) & Syva Co.)
3401 Hillview Avenue, M/S A6-ELAW
P.O. Box 10850
Palo Alto, California 94303
Attn: William D. Jeffery, Esq.

Xerox Corporation
3333 Coyote Hill Road
Palo Alto, California 94304
Attn: David Ham

Teledyne MEC Site, 3165 Porter Drive, Palo Alto, California -
Order No. HSA 90/91-004

Teledyne MEC
1274 Terra Bella Avenue
P.O. Box 7127
Mountain View, California 94039-7127
Attn: Phil Atkinson

Teledyne-Singer Site, 3176 Porter Drive, Palo Alto, California -
Order No. HSA 86/87-012EO (Amended November 1991)

Loral Librascope Corporation
3501 Jamboree Boulevard, Suite 500
Newport Beach, California 92660
Attn: Sal Molina

Watkins-Johnson Company Site, 3333 Hillview Avenue, Palo Alto,
California - Order No. HSA 89/90-012

Watkins Johnson Company
3333 Hillview Avenue
Palo Alto, California 94304
Attn: Mark Reedy

ATTACHMENT

4

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

REGION 2

700 HEINZ AVE., SUITE 200
BERKELEY, CA 94710-2737

June 10, 1994



Ms. Kathy Herzing
Hewlett-Packard Company
1501 Page Mill Road, M/S 5U-E
Palo Alto, California 94304

Dear Ms. Herzing:

HEWLETT-PACKARD BUILDING 15 SITE, ORDER NO. HSA 88/89-024
HEWLETT-PACKARD BUILDINGS 28 A,B,C SITE, ORDER NO. HSA 90/91-007-
ANNUAL PERFORMANCE REVIEWS

As discussed with your consultant, Mr. Ken Hoffman, SEACOR, in April 1994, the Department will require submittal of an annual performance review for the air injection/soil vapor extraction and treatment system at the Hewlett-Packard Building 15 Site and for the groundwater extraction and treatment system at the Hewlett-Packard Buildings 15 and 28 A, B, C Sites. The performance reviews for these systems may be combined into one document, if desired.

This report must include the following information:

- o An introduction which describes 1) the purpose of the report; 2) the location of the Site and 3) a brief summary of the Site history.
- o A description of the remedial action(s) implemented.
- o A description of any problems encountered and significant adjustments made to the system(s) during the past year.
- o Tables containing all of the required sampling and monitoring results for the year being reported, along with a table containing the historical analytical data and figure(s) showing the monitoring and sampling locations. Data from adjacent sites should be evaluated and included, as appropriate, to verify that the remedial action is meeting the goals stated in the final Remedial Action Plan.
- o A summary of the flow rates and operating pressures for the air injection wells and for each soil vapor extraction well and the groundwater extraction wells. Verify that injected air is being captured by the extraction system should be included for the air



Ms. Kathy Herzing
June 10, 1994
Page Two

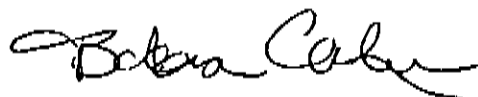
injection/soil vapor extraction and treatment system. The capture zones achieved by the groundwater extraction and treatment system should be included for the groundwater extraction system.

- o Tables and/or figures showing carbon usage and the time for breakthrough should be included.
- o A summary of documents submitted to other agencies to comply with permit requirements and requirements of the Regional Water Quality Control Board (RWQCB) interim authorization should be included. Any violations of permit conditions or interim authorization conditions which occurred during the past year must be discussed, along with the steps taken to return to compliance.
- o A description of any trends noted in the data and any anomalies noted should be included. Progress toward achieving remediation goals, including pounds of VOCs removed, should be reported.
- o A description of and the rationale for any proposed modifications to the system or to the operation of the system, along with a proposed schedule for implementation of these modifications. Examples of potential modifications are expansion of the groundwater extraction system, modification of flow rates, or pulse pumping of the vapor extraction system.

The first annual performance review will be due no later than December 30, 1994, to allow the incorporation of the November groundwater sampling data. Subsequent reports will be required annually, the last working day in December. A specific annual performance review will not be required every fifth year, as the above elements will be required, included and expanded upon in the mandatory CERCLA five-year review.

If you have any questions, please contact Janet Naito at (510) 540-3833.

Sincerely,



Barbara Coler
Unit Chief
Site Mitigation Branch

cc: See next page

**REVISED
SOIL INVESTIGATION SUMMARY**

**HEWLETT-PACKARD
3215 PORTER DRIVE
(BUILDING 15)
PALO ALTO, CALIFORNIA**

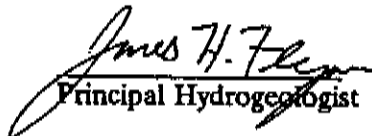
JUNE 21, 1991

Prepared by
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SEACOR

June 21, 1991

Ms. Kathy Herzing
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Hewlett Packard Company
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REVISED SOIL SUMMARY REPORT AND RESPONSE TO DHS COMMENTS

Dear Ms. Herzing:

The California Department of Health Services (DHS) provided comments in a letter dated April 25, 1991 on the Soil Investigation Summary Report (SEACOR February 4, 1991) for the Hewlett-Packard Building 15 site (3215 Porter Drive, Palo Alto, California). A revised report was prepared in response to DHS comments on May 15, 1991. In a letter dated June 4, 1991, DHS noted approval of the revised soil investigation summary report subject to modifications of sections 2.2.5.3 and 2.2.5.4. These modifications can be found on pages 2-8 and 2-9 of this report.

The responses below are numbered in sequence and correspond with the DHS April 25th comments.

1. References to cleanup levels have been removed from the revised report with the exception of the discussion of interim cleanup levels used inside Building 15 during the recent construction activities per DHS approval.
2. The waste solvent tank and cation exchanger information were originally taken from the RI/FS Workplan Scoping Document prepared by McLaren Hart (October 3, 1989 Volume 5 of 6). Upon further review Hewlett-Packard has determined that a cation exchanger was located in the waste treatment area but that a waste solvent tank was not located there. Thus, reference to a waste solvent tank has been removed from the revised soil investigation summary report. Furthermore, this letter serves as a retraction for the prior misstatement in the RI Workplan prepared by McLaren Hart that incorrectly suggested that a waste solvent tank was located in the waste treatment area.
3. Data gaps are not addressed in this report. They have been addressed in the FS Workplan submitted on April 26, 1991. We have attempted to make the soil investigation summary report a succinct report of soil data. The soil data for boring AR-3 and soil sampling activities for new well R-6 (MW-41) are discussed in section 2.2.2.1.

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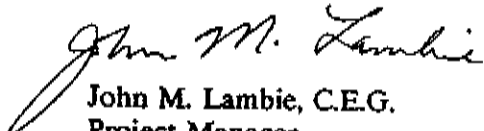
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4. Figure 2.5 has been revised to show the outline of excavated soil in this area. Figure 2.8 is at too large a scale for detailed incorporation of each of the individual excavated areas. We have addressed each excavated area on a separate figure.

If you have questions or comments please give us a call.

Sincerely,


John M. Lambie, C.E.G.
Project Manager


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Enclosure

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TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
1.0	INTRODUCTION	1-1
2.0	SOIL INVESTIGATION SUMMARY	2-1
2.1	Chemicals of Concern	2-1
2.2	Areas Investigated	2-1
2.2.1	Sanitary Sewer	2-2
2.2.2	Former Chemical Storage Shed/Pipe Trench	2-3
2.2.3	Former Chemical Storage Bunker	2-4
2.2.4	Chemical Dilution Pit	2-5
2.2.5	Other Areas Inside Building 15	2-7
3.0	REFERENCES	3-1

APPENDICES

Appendix A	Summary of Volatile Organic Compounds Detected in Soil Samples
Appendix B	Summary of Metals, Cyanide and pH Detected in Soil Samples
Appendix C	Summary of Volatile Organic Compounds Detected in Soil Vapor Samples

LIST OF TABLES

<u>Table</u>	<u>Title</u>
2.1	Interim Soil Cleanup Levels for Inside Building 15 Derived from MYGRT2

LIST OF FIGURES

<u>Figure</u>	<u>Title</u>
Figure 1.1	Building 15 Site Plan
Figure 2.1	VOCs Detected in Soil near the Sanitary Sewer Line
Figure 2.2	Chemical Storage Shed and Pipe Trench Auger Rig and Monitoring Well Soil Sample Locations and TCE Concentrations
Figure 2.3	Chemical Storage Shed and Pipe Trench Hand Auger Soil Sample Locations and TCE Concentrations
Figure 2.4	VOCs Detected in Soil Borings in the vicinity of the Chemical Storage Bunker
Figure 2.5	VOCs Detected in Soil near the Chemical Storage Room
Figure 2.6	Chemical Dilution Pit Confirmatory Soil Sample Locations and TCE Concentrations
Figure 2.7	VOC concentrations in Soil Vapor inside Building 15
Figure 2.8	Volatile Organic Compound Concentrations in Soil Samples Located inside Building 15

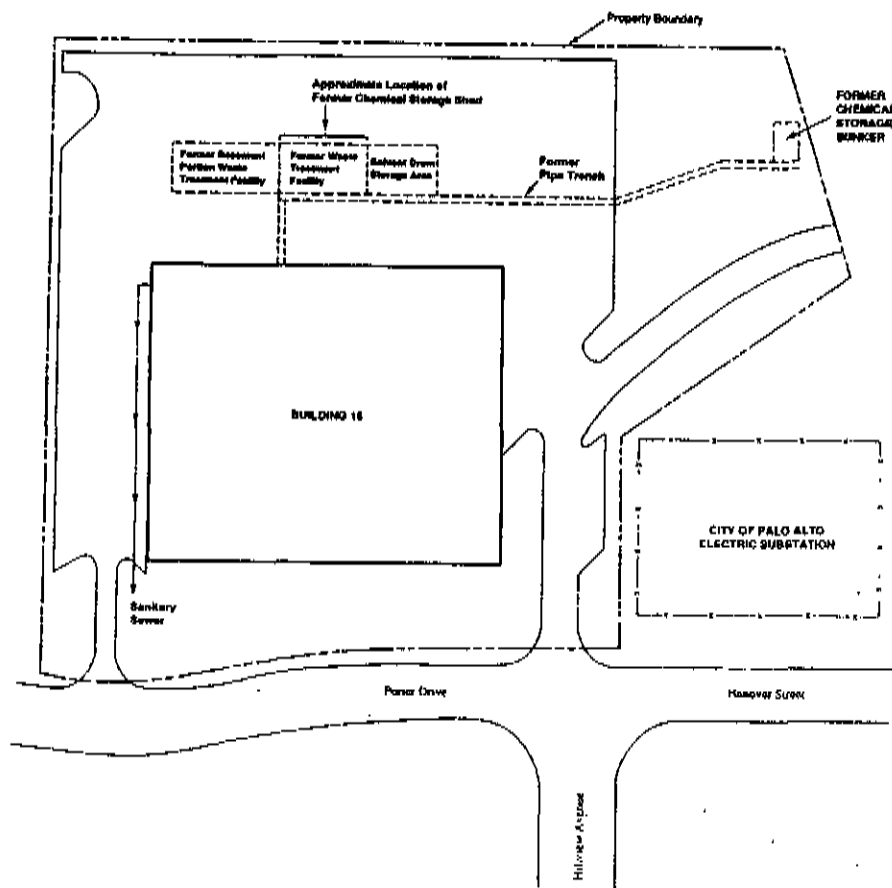
SECTION 1.0

INTRODUCTION

On August 15, 1990, the Remedial Investigation (RI) Report (McLaren, 1990c) was submitted to the Department of Health Services (DHS) for the Hewlett-Packard site located at 3215 Porter Drive (Building 15), Palo Alto, California. After reviewing the RI Report, DHS requested that Hewlett-Packard provide a complete soil characterization summary consisting of tables of the soil investigation results and figures depicting soil sampling results. The purpose of this report is to fulfill the DHS request. The data summarized in this report includes all results of soil sampling and soil vapor surveys conducted at the Building 15 property prior to December 1990. Figure 1.1 is a site plan of the Building 15 property and illustrates the specific areas addressed during soil investigations.

The following section (Section 2.0) of this report provides a summary of the soil investigation results which is divided into specific areas investigated.

FIGURE 1.1
BUILDING 15 SITE PLAN



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SECTION 2.0

SOIL INVESTIGATION SUMMARY

Since 1987, five phases of soil investigations, Phases I through V, have been conducted at the Building 15 facility to evaluate potential source areas and the extent of chemicals beneath the facility (McLaren, 1990c). The soil investigations included soil vapor surveys and soil sampling and analysis. All known and suspected chemical use areas were investigated.

2.1 CHEMICALS OF CONCERN

Chemicals usage at the Building 15 site is described in detail in the Scoping Document (McLaren, 1989c) and the Remedial Investigation Report. The primary contaminants of concern at the Building 15 property are VOCs and metals. The VOCs most frequently detected in soil samples include: trichloroethylene (TCE), methylene chloride (MeCl), 1,1,1-trichloroethane (1,1,1-TCA), and tetrachloroethene (PCE). The metals most frequently detected above background levels include: chromium, copper, lead and nickel.

Analyses for soil samples were chosen depending on the location of the sample relative to known or potential source areas. In addition, soil vapor surveys were conducted as an aid in determining soil sample locations. Soil samples were analyzed for volatile organic compounds (VOCs) using EPA Method 8010 or 8240, semi-volatile organic compounds using EPA Method 8270, pH using EPA Method 9045 and metals using EPA Method 7000 series. Soil vapor samples were analyzed for the presence of MeCl, 1,1,1-TCA, PCE and TCE.

2.2 AREAS INVESTIGATED

Soil investigations have been conducted at areas where chemical usage, handling, and treatment/disposal practices may have resulted in potential releases of chemicals into the subsurface soil. The uses of these areas are described in detail in the Scoping Document and the Phase V Report.

Soil samples were collected through hand auger borings, hollow stem auger rig (auger rig) borings and backhoe pits. These soil samples are designated HA for hand auger boring samples, AR for hollow stem auger boring samples and BH for backhoe pit samples. Soil vapor surveys were conducted to aid in directing soil investigations. Field investigations were conducted in accordance with procedures described in the QA/QC Plan (McLaren, 1989a).

The areas investigated during the five phases of investigation include:

- Sanitary Sewer,
- Former Chemical Storage Shed/Pipe Trench,
- Former Chemical Storage Bunker,

Chemical Dilution Pit, and

Other Areas Inside Building 15.

Of the areas investigated, VOCs were consistently detected at the former chemical storage shed located northwest of Building 15, the former Chemical Storage Bunker located north of Building 15 and the Chemical Dilution Pit in the Chemical Storage Room at the west corner of Building 15. The Feasibility Study Report describes the selected remedial alternatives for soil at these locations.

A summary of each of the areas investigated is presented below. Analytical results for VOCs and metals are summarized in Appendices A and B, respectively. Results of the soil vapor surveys are summarized in Appendix C.

2.2.1 Sanitary Sewer

The sanitary sewer leaves Building 15 on the southwest side near the western corner of the building, then turns southeast toward Porter Drive. The sewer line was identified as a potential source area during the Phase I investigations (McLaren, 1987). A drain leads to the sewer from one of the chambers of the former Chemical Dilution Pit. In addition, there were unconfirmed reports of chemical spills near the sewer line.

Five auger borings (AR-4, AR-5, AR-11, AR-22, and AR-37) were drilled near the sanitary sewer line. Locations of these borings are shown on Figure 2.1. Samples from these borings were analyzed for VOCs, semi-volatile organic compounds, metals, tin, cyanide and pH.

2.2.1.1 VOC Results

Samples from all five borings were submitted for VOCs analysis. The VOCs detected in these soil samples include: TCE, 1,1,1-TCA, MeCl and acetone. TCE and 1,1,1-TCA were detected in one boring (AR-4) at concentrations of 2.5 ppm and 4.8 ppm, respectively. TCE was also detected in AR-22 at a concentration of 0.012 ppm.

2.2.1.2 Semi-Volatile Organic Compound Results

Samples from two borings (AR-4 and AR-5) were analyzed for semi-volatile organic compounds. Analyses indicated non-detectable levels in these two borings.

2.2.1.3 Metals, Cyanide, and pH Results

Samples from two borings (AR-4 and AR-5) were analyzed for metals, cyanide and pH. Elevated metals concentrations were not detected. Tin and cyanide were not detected in these samples. The pH values for the samples tested ranged between 7.5 and 8.1.

2.2.2 Former Chemical Storage Shed/Pipe Trench

The former Chemical Storage Shed was located approximately 50 feet northwest of Building 15. The Shed and area surrounding were used to store chemicals used inside Building 15. A cation exchanger, used to remove metals from liquid wastes was also located inside the former Chemical Storage Shed. In 1974, the chemical storage shed was removed and a Waste Treatment Facility and pipe trench were constructed. The Waste Treatment Facility was used to treat chemical wastes previously treated inside Building 15. The pipe trench provided secondary containment for piping which conveyed chemicals to Building 15 from the Chemical Storage Bunker and from Building 15 to the Waste Treatment Facility. The Waste Treatment Facility and pipe trench were demolished and removed in 1988 (McLaren, 1988b).

Twenty-two hand auger borings, seven backhoe pits and twenty-six auger rig borings were completed in the vicinity of the former Chemical Storage Shed and pipe trench. In addition, soil samples from four monitoring wells were collected from this area. Soil samples collected from this area were analyzed for VOCs, semi-volatile organic compounds, metals, tin, cyanide and pH. Soil sample locations and TCE results are shown on Figures 2.2 and 2.3.

2.2.2.1 VOC Results

TCE was the most frequently detected VOC with concentrations ranging from 0.016 ppm to 31 ppm. The highest TCE concentrations in unsaturated soil samples were detected in Phase III hand auger borings (HA-17, HA-19, HA-29, HA-35, and HA-36). Subsequent to the Phase III sampling and analysis, approximately 200 cubic yards of VOC-bearing soil was excavated and disposed of at an appropriate off-site facility (McLaren, 1988b).

TCE was detected in AR-3 at a concentration of 25 ppm at a depth of 41.5 feet. During implementation of the RI Workplan (SEACOR 1990), soil samples were collected from boring R-6 (MW-41) in the vicinity of AR-3 to further evaluate the vertical extent of VOCs in soil. A total of 6 samples were submitted on April 10, 1991 and analyzed for VOCs using EPA Method 8240. Two soil samples were collected in the first aquitard underlying the saturated alluvium and one sample collected from each of the following two aquifers and aquitards. Large rocks prevented a sample from being collected at the base of the alluvium aquifer.

Soil results from R-6 were received from the laboratory on May 9 and will be included in May 1991 monthly status report along with recommendations for additional sampling activity.

2.2.2.2 Semi-Volatile Organic Compound Results

Samples from two borings were submitted for semi-volatile organic compound analysis (AR-3 at 5.5 feet and HA-15 at 2.5 feet). Semi-volatile organic compounds were not detected in these samples.

2.2.2.3 Metals, Cyanide, and pH Results

Samples from seven borings were analyzed for metals (AR-3, HA-15, HA-34, HA-41, AR-38, AR-39, and AR-40). Lead was detected in HA-41 at 720 ppm and copper was detected at 240 ppm. Due to a relatively high level of lead, the sample was analyzed to determine the soluble portion of the lead. The soluble portion of lead in HA-41 was 7.1 ppm. However, during Phase V investigations,

three additional borings (AR-38, AR-39 and AR-40) were drilled and sampled to verify the presence and delineate the extent of lead in the soil. Results of these samples indicate that lead is present at concentrations ranging from 2.4 ppm to 2.7 ppm at this location. Phase V investigation results indicate that the extent of elevated lead concentrations is very limited.

Samples from two borings (AR-3 and HA-15) were analyzed for tin and cyanide. No tin or cyanide was detected in samples analyzed from this area.

Samples from four borings were analyzed for pH. The pH values ranged between 7.5 and 8.3 for these samples.

2.2.3 Former Chemical Storage Bunker

The former Chemical Storage Bunker was installed in 1974 on a hillside approximately 200 feet north of Building 15. The Chemical Storage Bunker was 31 feet long by 16 feet wide and was partially below grade. Four tanks within the bunker were used to store 1,1,1-TCA, MeCl, sulfuric acid, and alkaline etch. The chemicals were conveyed from the bunker to Building 15 in pipelines contained in the pipe trench. In 1975 or 1976, an unknown amount of sulfuric acid was reported to have been spilled in the bunker. It is thought that the spill was released to ground via a storm water seepage pit located on the southeast side of the bunker.

Seven auger rig borings, five hand auger borings and one backhoe pit were completed in the area of the former Chemical Storage Bunker. In addition, samples from one monitoring well were collected. During Phase V investigations, a soil vapor survey consisting of nine soil vapor sample points was conducted. Locations of these sampling points and a summary of VOC results for soil samples are shown on Figure 2.4.

2.2.3.1 VOC Results

Soil samples from each of the fourteen sample locations were submitted for analysis for VOCs. VOCs were detected in samples collected from eleven of these locations. The highest total VOC concentration detected was approximately 22 ppm in HA-23 (9.0 feet).

1,1,1-TCA was detected in samples from seven locations (AR-1, AR-47, AR-48, AR-50, HA-20, HA-23 and BH-8) with concentrations ranging from 0.0064 ppm to 2.5 ppm. The highest concentrations of 1,1,1-TCA were detected in AR-1 (1.9 ppm at 16.5 feet) and HA-23 (2.5 ppm at 9.0 feet).

Methylene chloride was detected in samples from six borings (AR-48, AR-49, AR-50, HA-1, HA-23 and BH-8) with concentrations ranging from 0.32 ppm to 19.0 ppm. The highest concentrations of MeCl were detected in four samples collected from AR-50 (1.5 ppm at 11.0 feet, 5.5 ppm at 20.0 feet, 1.8 ppm at 30.0 feet and 2.6 ppm at 40.0 feet) and in one sample collected from HA-23 (19 ppm at 9.0 feet).

Soil gas survey data indicate that total vapor concentrations of greater than 5,000 ppm are present beneath the former Bunker and also beneath a portion of the pipe trench (McLaren, 1990a). The distribution of VOCs in soil vapor appears to correlate well with soil analytical results.

2.2.3.2 pH Results

In general, pH values ranged between 6.8 and 8.0 with two exceptions. A sample from 7.0 feet in BH-8 had a pH of 4.4. This may be an indication of a previous acid spill in this area. However, the sample from 14.0 feet in BH-8 had a pH of 7.7 which indicates the shallow extent of low pH values. A sample from HA-20 (6.5 feet) had a pH of 9.6.

2.2.4 Chemical Dilution Pit

Between 1965 and 1974, acidic wastes were neutralized in a series of concrete lined pits prior to discharge to the sanitary sewer. These pits are collectively referred to as Chemical Dilution Pit. Building plans indicate the Chemical Dilution Pit was 9 by 17.5 feet. The pit contained a series of baffles that channeled the waste through four dilution chambers before the wastes entered the sanitary sewer. The first three chambers were 8 feet deep and the fourth chamber was 4 feet deep. The sanitary sewer line from the dilution pit exits Building 15 on the southwest side and flows toward Porter Drive. The pit was filled with sand and capped with concrete in 1974 when a new waste facility was constructed behind Building 15.

Four shallow acid pits adjacent to the chemical dilution pit were identified on building plans. Hewlett-Packard personnel have not confirmed the presence of the shallow acid pits. It is suspected that these pits may have received concentrated acid wastes. The pits were rectangular in shape with a maximum depth of 0.5 feet. Building plans indicate that the concrete beneath the acid pits was approximately 0.5 feet thick. The largest pit measured 9 feet by 4 feet. All four pits drained into the first chamber of the chemical dilution pit.

2.2.4.1 Investigations Prior to Chemical Dilution Pit Removal

During Phase I through Phase V investigations, twelve auger rig borings and five hand augers were completed in the area of the Chemical Dilution Pit. Samples from these borings were analyzed for VOCs, semi-volatile organic compounds, heavy metals, tin, cyanide and pH. Locations of these borings and VOC results are shown on Figure 2.5.

Following the Phase V investigation a Feasibility Study (FS) report (McLaren 1990) was prepared. As part of the FS, interim cleanup levels for VOCs detected in soil beneath Building 15 were developed using site specific data and a risk based numerical model (MYGRT2). A discussion of this model is presented in the FS Report. Calculated interim soil cleanup values are summarized in Table 2.1. In addition to calculated interim cleanup levels for individual contaminants, DHS has requested that total concentrations for VOCs not exceed 1 ppm. These interim cleanup levels are relevant in this section which discusses the Chemical Dilution Pit inside Building 15 and Section 2.2.5 which discusses other areas inside Building 15.

VOC Results

Eleven VOCs were detected in borings in and near the Chemical Dilution Pit. Of these, TCE and PCE were detected above interim cleanup levels. TCE was detected above the interim cleanup level in three borings (HA-5, HA-6, and HA-8) at concentrations ranging from 1.2 ppm to 6.7 ppm. PCE was detected above the interim cleanup level in three borings (HA-5, HA-6, and HA-7) at

concentrations ranging from 4.3 ppm to 110 ppm. TCE, PCE, and other VOCs were also detected in the sandy material (AR-8 and AR-32) used to fill the chambers of the chemical dilution pit when it was abandoned in 1974.

Although ethyl benzene and xylene were detected in HA-8, these compounds were not detected at a similar depth in AR-33 which was drilled immediately adjacent to HA-8. Therefore, the presence of ethyl benzene and xylene appears very limited and is not a significant concern.

Semi-volatile Organic Compound Results

Samples from two borings (AR-7 and HA-3) were analyzed for semi-volatile organic compounds. Bis (2-ethylhexyl) phthalate was detected in one of these samples at a concentration of 1.1 ppm. No other semi-volatile organic compounds were detected in these samples.

Metals, Cyanide and pH Results

Samples from thirteen borings were submitted for metals analysis. Copper and nickel were detected in HA-6 at levels higher than other samples from this area (copper at 320 ppm and nickel at 480 ppm). Due to the relatively high levels of copper and nickel in HA-6, the sample was analyzed to determine the soluble portion of the metals. The soluble portion of copper and nickel in HA-6 were both 1.9 ppm.

Seven samples were analyzed for tin and cyanide. Tin was detected in four borings (HA-5, HA-6, HA-7, and HA-8) at concentrations ranging from 8.1 to 34 ppm and cyanide was detected at a concentration of 12 ppm in AR-8 (7.9 feet).

Values of pH for soils in the area of the chemical storage room ranged from 6.9 to 12.

2.2.4.2 Investigations During Removal of the Chemical Dilution Pit

The chemical dilution pit was demolished in-place and concrete rubble removed during April 1990 (McLaren, 1990b). Prior to removal, the pit had been closed in place and was filled with sand. Confirmatory soil sampling was performed in conjunction with the removal of the Chemical Dilution Pit. Nine hand auger borings (Figure 2.5) were completed and soil verification samples were collected to evaluate underlying soil conditions. These sample locations were selected based on photoionization detector (PID) readings taken from the pit excavation. These soil samples were analyzed for VOCs and total metals.

VOC Results

TCE and PCE were detected in the soil samples. The highest concentrations of TCE were detected in two borings HA-P4 (8.0 ppm) and HA-P6 (1.4 ppm). The highest concentrations of PCE were detected in borings HA-P4 (12 ppm) and HA-P6 (1.2 ppm).

Metals Results

One soil sample from each of the nine confirmatory sample locations was analyzed for metals. Metals concentrations did not appear to be elevated.

2.2.4.3 Final Confirmation Sampling

In October, 1990, additional confirmation samples were collected and analyzed for VOCs to both further characterize soils in the western portion of the Chemical Dilution Pit, and to further define the lateral and vertical extent of VOCs in soil. Twenty-eight samples were collected from ten sampling locations (Figure 2.6) and analyzed for VOCs using EPA Method 8010. During this sampling event approximately 100 cubic yards of soil was excavated from beneath the former Chemical Dilution Pit (McLaren, 1990f). Analytical holding times were exceeded for 16 of the 28 samples. As requested by DHS, new soil samples were collected to replace the data for the 16 samples where the holding times had been exceeded. The soil beneath the chemical dilution pit was resampled in November 1990 and approximately 100 cubic yards of soil was excavated (McLaren, 1990f). VOCs were not detected above interim cleanup levels in any of the samples collected during the two sampling episodes (Figure 2.6).

2.2.5 Other Areas Inside Building 15

Prior to Phase IV investigations (McLaren 1989b), a soil gas survey was conducted at 38 sample points inside Building 15 to evaluate potential sources of volatile organic compounds. The purpose of the soil vapor survey at the Building 15 site was to identify areas where significant releases of VOCs may have occurred inside the building. The selection of analytes was based on chemical use histories and data from previous investigations.

Soil gas samples collected during the survey were analyzed for TCE, PCE, 1,1,1-TCA, methylene chloride (MeCl), 1,1-DCE, 1,1-DCA, and trans-1,2-DCE. At the request of DHS, chloroform, carbon tetrachloride, and Freon 113 were also included in the list of analytes. To address additional compounds which were potentially present and to verify field results, six samples were collected in Tedlar bags and analyzed. Five of the ten compounds analyzed for were detected. The compounds detected were TCE, PCE, and trans-1,2-DCE. 1,1-DCE and/or MeCl were also detected; however, due to coelution, the compound detected could not be specified.

Figure 2.7 presents contours of the total VOC concentrations in soil vapor. The highest VOC concentrations in solid vapor were detected at locations SV-8, SV-15, and SV-17 where total VOC concentrations range from 5,190 to 10,304 ppb. Lower VOC concentrations were also detected at nearby locations SV-7, SV-18, and SV-25. Other areas where VOCs were detected in two or more adjacent sample locations include SV-23, SV-30, and SV-33 (up to 150 ppb total VOCs), and SV-10 and SV-11 (up to 1,000 ppb total VOCs), and SV-1, SV-13, SV-14, and SV-2 (up to 10 ppb total VOCs). VOCs were also detected at the following isolated sampling points at concentrations less than 50 ppb: SV-3, SV-9, SV-28, and SV-36.

Sixty-four hand auger borings and eleven auger rig borings have been completed inside Building 15 (excluding the Chemical Storage Room). Except for a few samples collected during Phase I, the sampling was performed during and after the soil vapor survey. Locations of these borings are shown on Figure 2.8. Samples were analyzed for VOCs, metals and/or pH. Locations of these borings are divided into the following areas within Building 15:

- Trichloroethylene Still,
- Solvent Waste Pit,

Methylene Chloride Still, and

Degraded Concrete Floor.

The soil investigation at each of these areas inside Building 15 is described below.

2.2.5.1 Trichloroethylene Still

The TCE Still was located northeast of the Chemical Storage Room and was used from 1965 to 1973. Two borings (AR-34 and AR-35) were completed in the approximate location of the TCE Still. Samples from these borings were analyzed for VOCs, metals and pH.

VOC Results

TCE was detected in samples analyzed from the two borings. TCE concentrations generally increased with depth. The increase of TCE concentrations in these borings with depth may be attributable to groundwater contamination.

Metals and pH Results

A sample from one boring (AR-35) in the area of the TCE Still was analyzed for metals. The concentration of chromium was 130 ppm and nickel was 120 ppm. Values of pH for soils ranged from 7.1 to 8.0.

2.2.5.2 Solvent Waste Pit

A solvent waste pit was identified on building plans which indicate that the pit was 4 feet by 4 feet, and 5 feet deep. Hewlett-Packard personnel have reported that a solvent waste pit was not visible at the location identified on the building plans, consequently it is not known if this pit was actually constructed. Two hand auger borings (HA-13 and HA-96) were drilled in the location of the solvent waste pit. A sample from each boring was analyzed for VOCs.

VOC Results

VOCs were not detected in the sample collected from HA-13. The sample analyzed from HA-96, contained 1,2-DCE at a concentration of 0.03 ppm.

2.2.5.3 Methylene Chloride Still

A methylene chloride still was located in the central portion of Building 15 (Figure 2.8). This still was above ground and was used to reclaim spent solvents. Two hand auger borings (HA-12 and HA-90) were drilled in the location of the methylene chloride still. One sample from each boring was analyzed for VOCs. No VOCs were detected in these samples.

2.2.5.4 Concrete Floor

The concrete floor throughout the manufacturing (plating) areas inside Building 15 was degraded due to prolonged contact with acids used in the plating process. Sixty-three hand auger borings and

eleven auger rig borings were drilled in degraded concrete floor and other areas inside Building 15 (Figure 2.8). Soil samples from these borings were analyzed for VOCs, metals, and/or pH.

VOC Results

VOCs were detected in nineteen of the borings drilled through the concrete floor. MeCl was detected in ten borings and TCE was detected in eight borings. The maximum MeCl and TCE concentrations were 0.85 and 0.48 ppm, respectively. Other VOCs detected include 1,1-DCE, 1,2-DCE and PCE. No VOCs were detected above interim cleanup levels.

Metals and pH Results

Elevated metals concentrations were detected in samples collected from borings located in concrete floor areas inside Building 15. Results of soil sampling through Phase V investigations indicated that concentrations of metals used for plating inside Building 15 were significantly above background at three sample locations. In one boring (HA-10), nickel was detected at 300 ppm at a depth of 1.4 feet. In HA-57, copper was detected at a concentration of 690 ppm at a depth of one foot. In HA-62, copper was detected at 290 ppm and nickel was detected at 310 ppm at a depth of one foot.

Additional soil sampling and analysis for metals took place subsequent to Phase V investigations during removal of the concrete floor inside Building 15. During floor demolition activities on October 5, 1990, ammonia odors were detected when a 1.5-inch diameter metal pipe contained inside a 4-inch diameter polypropylene pipe was broken. Soil samples were collected from eight sample locations within this the first two samples collected (SP-1 and SP-2) at 940 ppm in SP-1 and 120 ppm in SP-2. Soil was excavated in this area prior to receipt of analytical data for samples collected from SP-1 and SP-2. The excavated soil and broken pipe were disposed of as hazardous waste and transported off-site to the Chemical Waste Management Kettleman Hills Class I facility. Six confirmation samples were collected at the base and edges of the excavation. The highest concentration of copper was detected in SP-3 at 1300 ppm at 3 feet in depth. Sample SP-4 at 4.25 feet in depth contained copper at 85 ppm. Other concentrations of copper in confirmatory samples were at or below 85 ppm.

The pH values for soil samples were generally within the range expected for background soils, which ranged from 6 to 9 for samples collected within Building 15. However, low pH values were detected in two borings in the southern portion of the building interior. These values include 4.1 for a sample collected from HA-14 and 5.5 and 5.9 for samples collected from HA-57.

TABLE 2.1
Interim Soil Cleanup Levels for Inside Building 15
Derived From NYGRT2

Chemicals	Location Specific Soil Cleanup Levels Chemical Dilution Pit (mg/kg)
Acetone	318.32
Methylene Chloride	0.21
Tetrachloroethylene (PCE)	61.1
Toluene	154
Trichloroethylene (TCE)	1.26

b15soils

FIGURE 2.1
VOCs DETECTED IN SOIL NEAR
THE SANITARY SEWER LINE

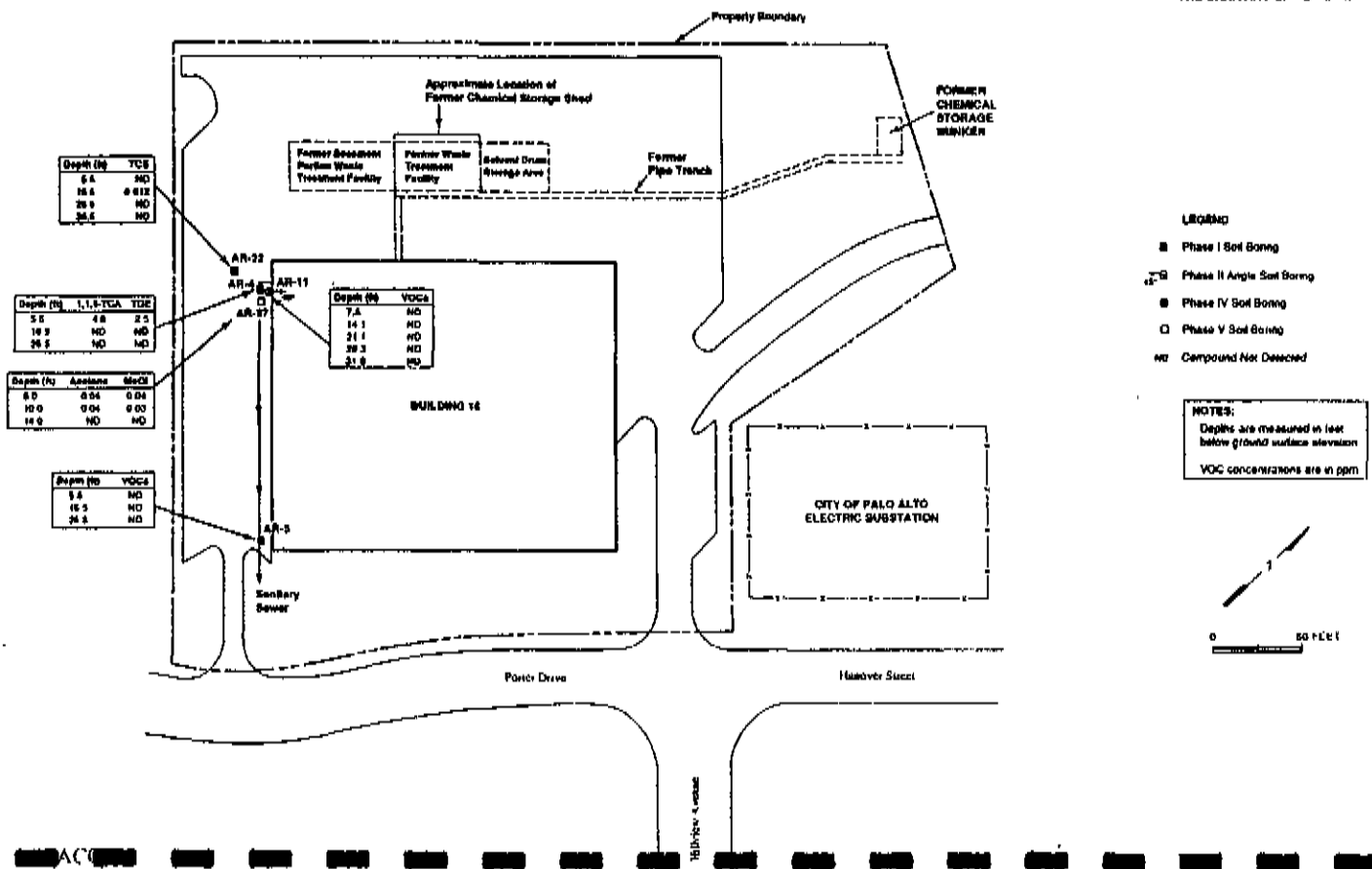


FIGURE 2.2
CHEMICAL STORAGE SHED AND PIPE TRENCH
AUGER RIG AND MONITORING WELL
SOL. SAMPLE LOCATIONS
AND TCE CONCENTRATIONS

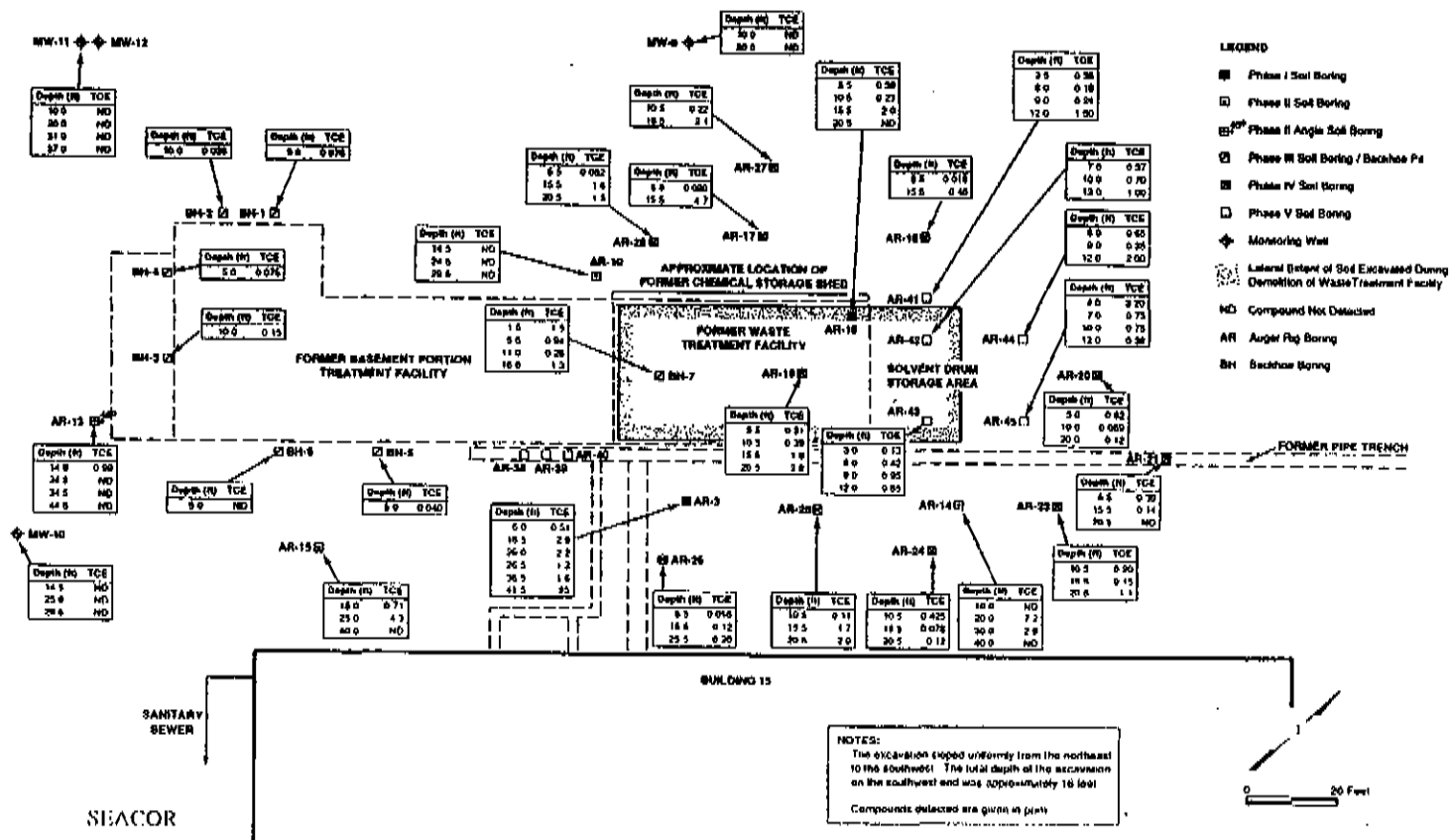


FIGURE 2.3
CHEMICAL STORAGE BINED AND PIPE TRENCH
HAND AUGER BORE SAMPLE LOCATIONS
AND TCE CONCENTRATIONS

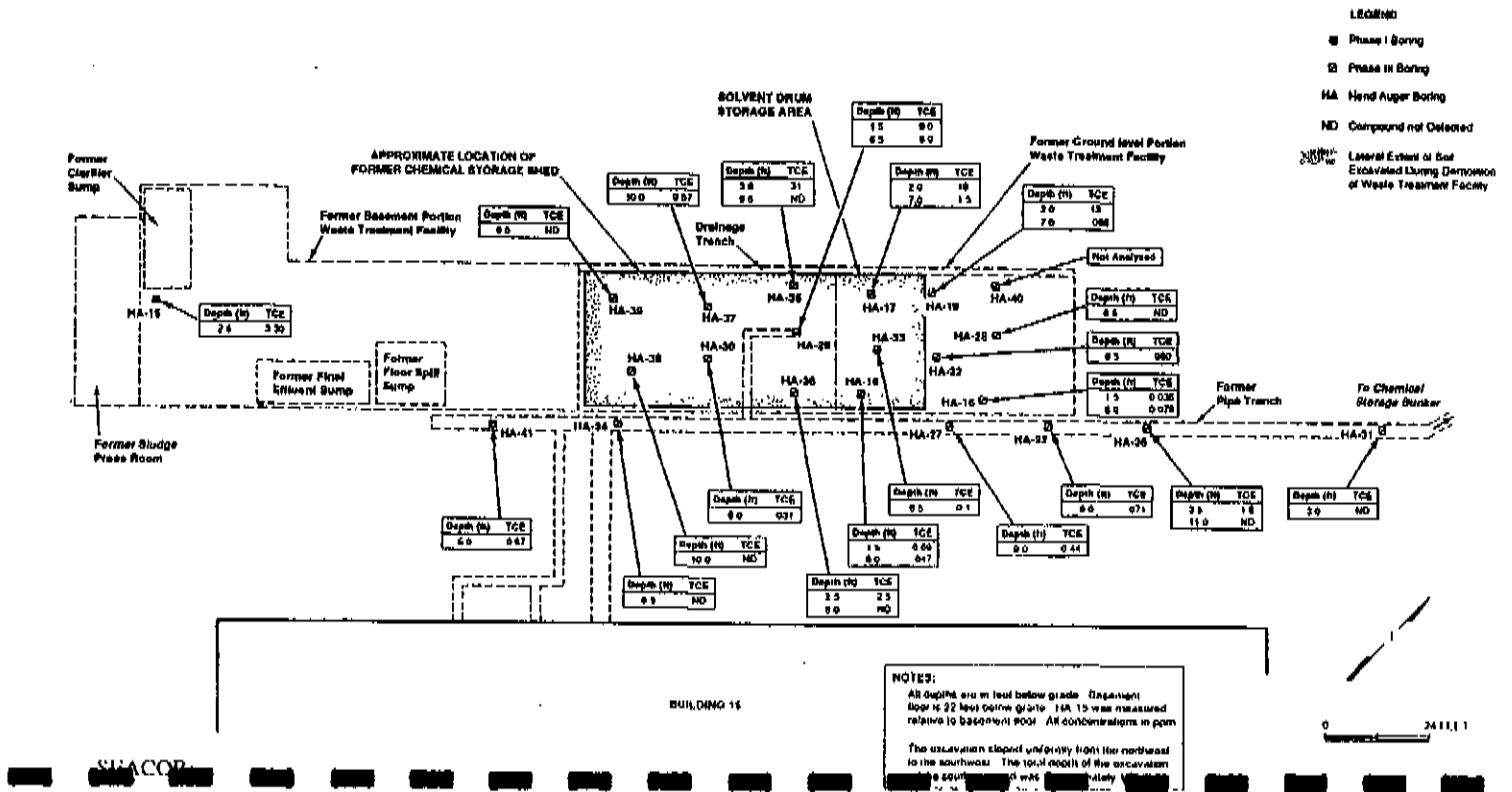


FIGURE 2.4
VOCs DETECTED IN SOIL BORINGS IN THE VICINITY
OF THE CHEMICAL STORAGE BUNKER

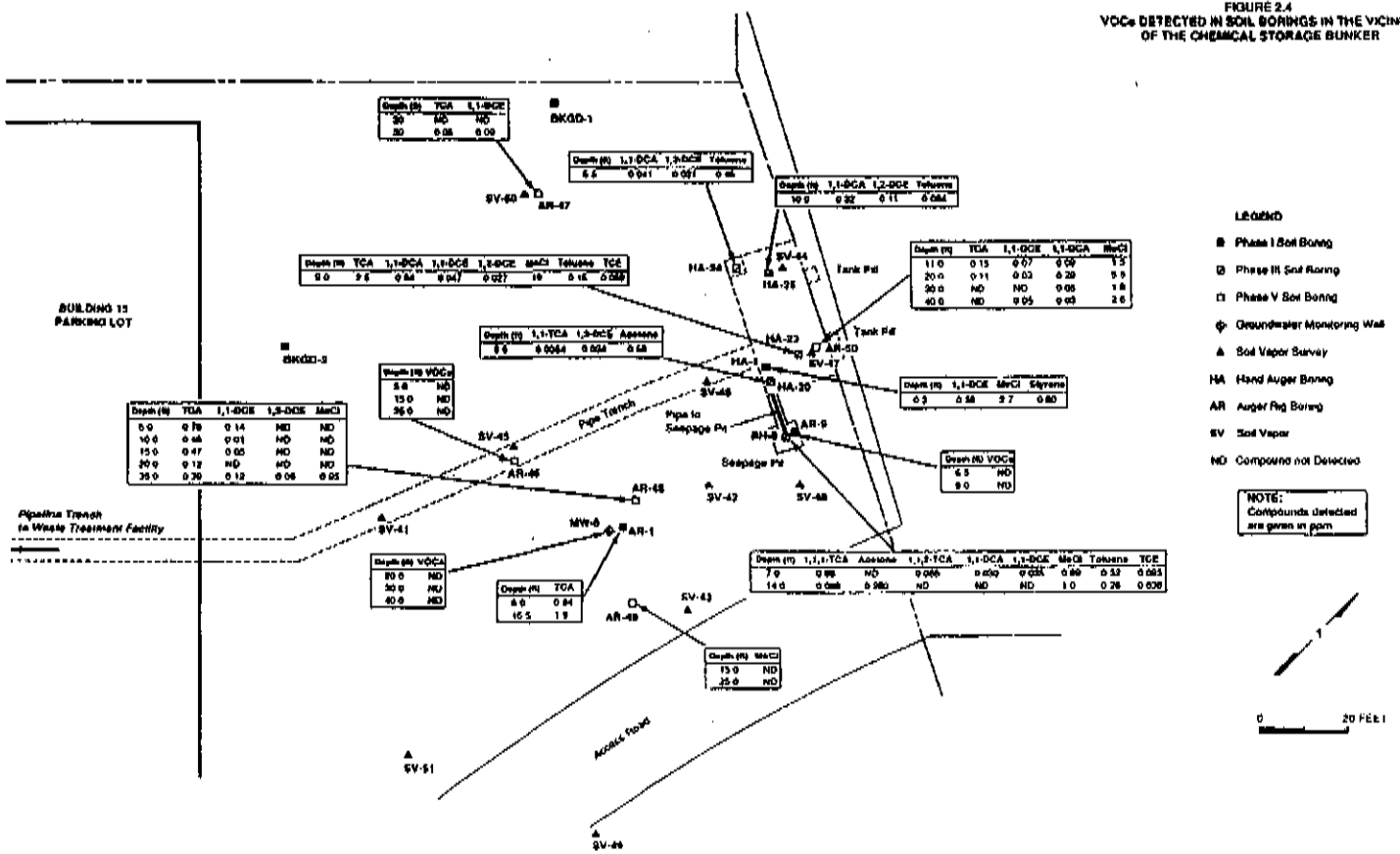
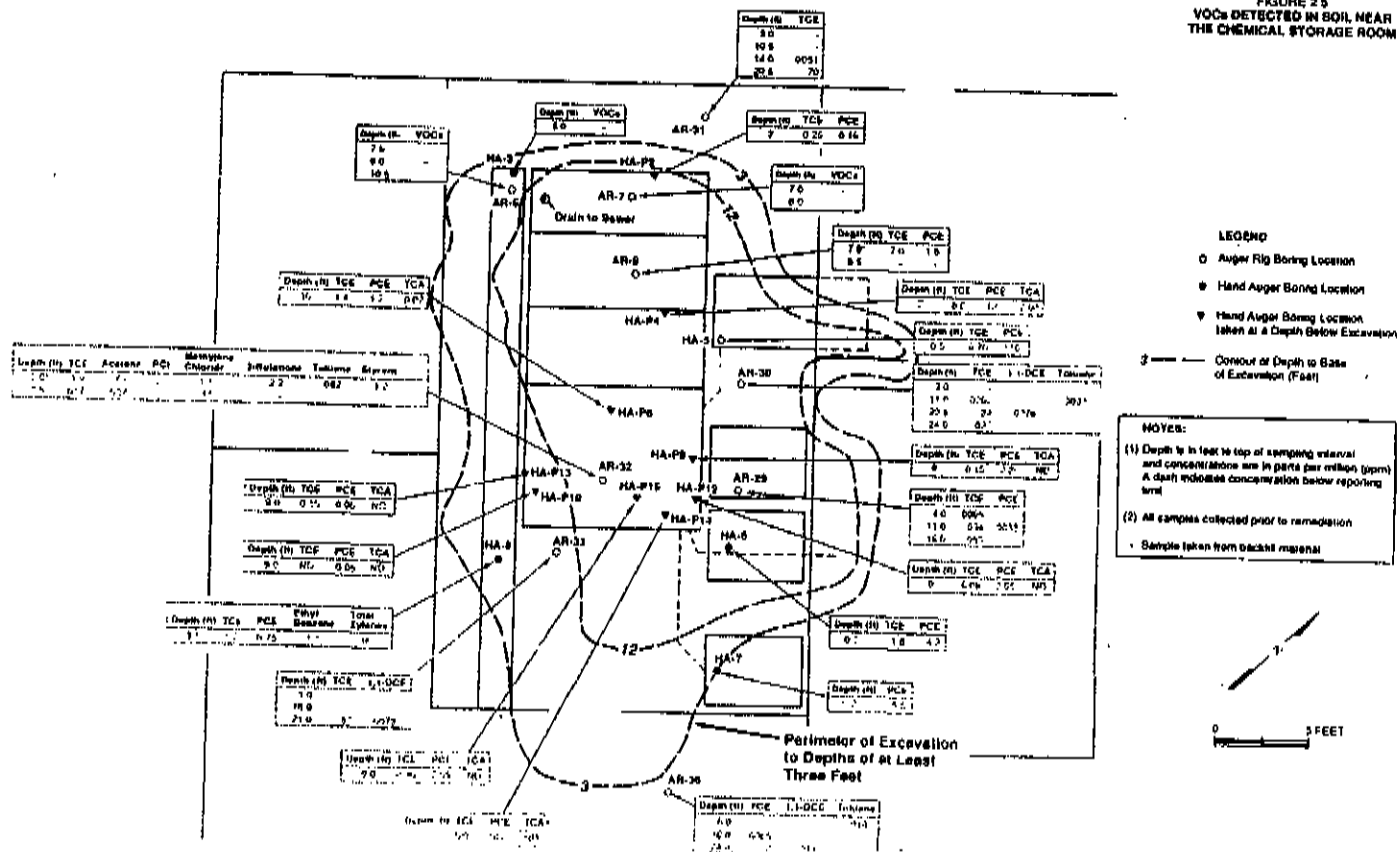


FIGURE 2.5
VOCs DETECTED IN SOIL NEAR
THE CHEMICAL STORAGE ROOM



SHACOR

FIGURE 2.6
CHEMICAL DILUTION PIT
CONFIRMATORY SOIL SAMPLE LOCATIONS
AND TCE CONCENTRATIONS

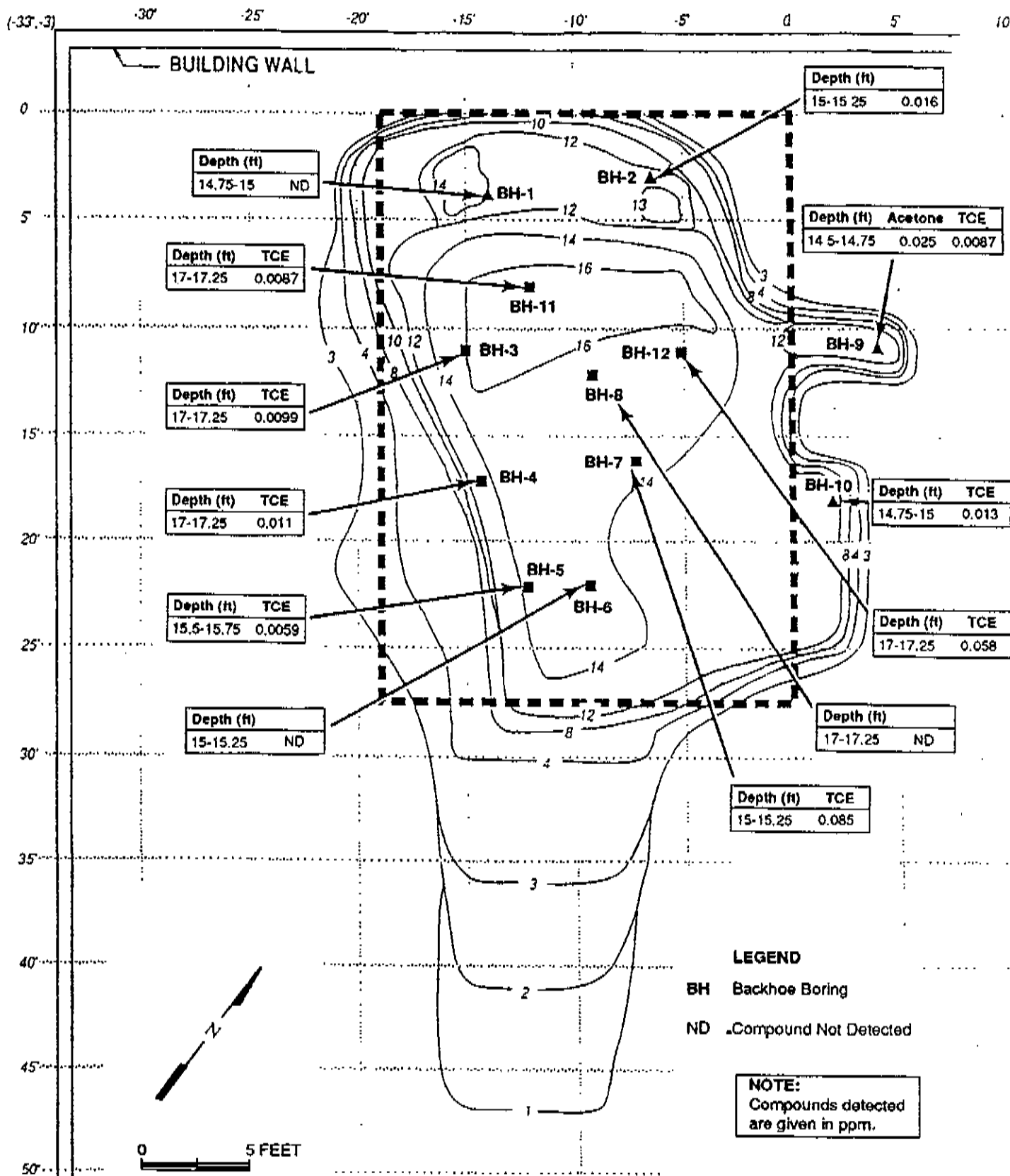
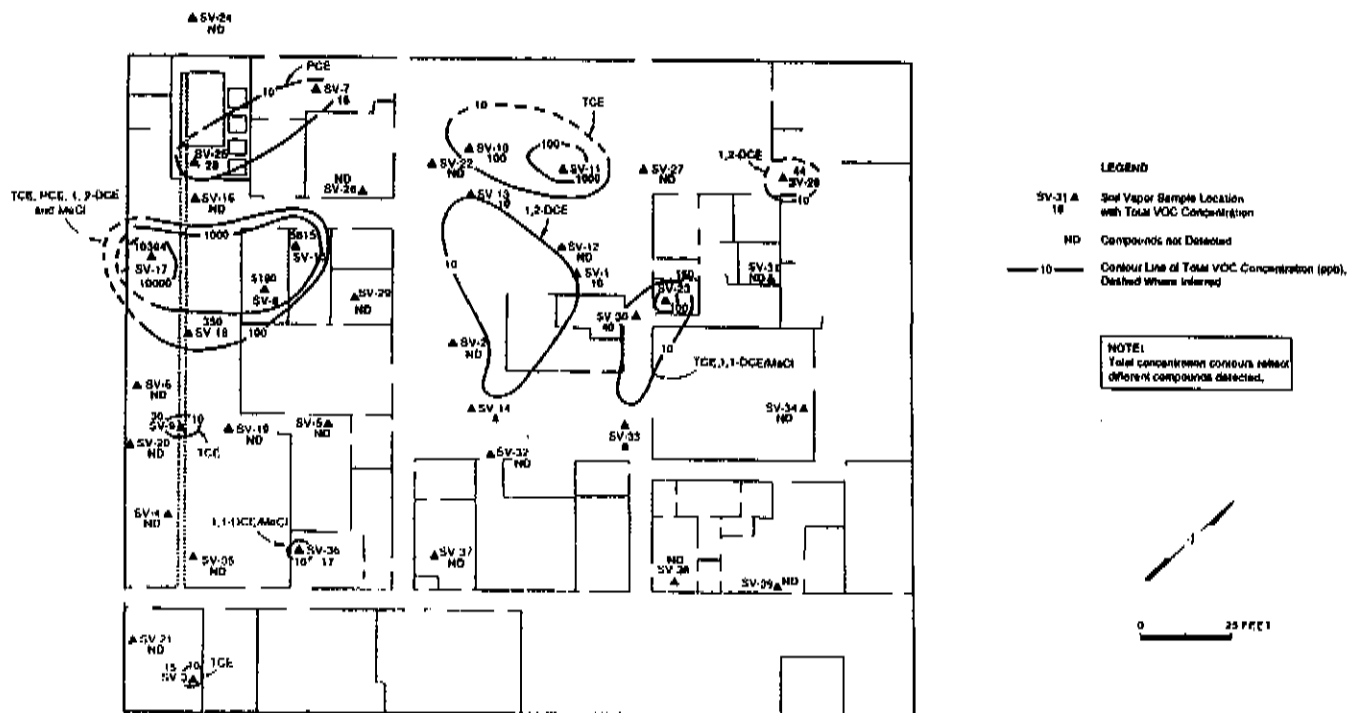
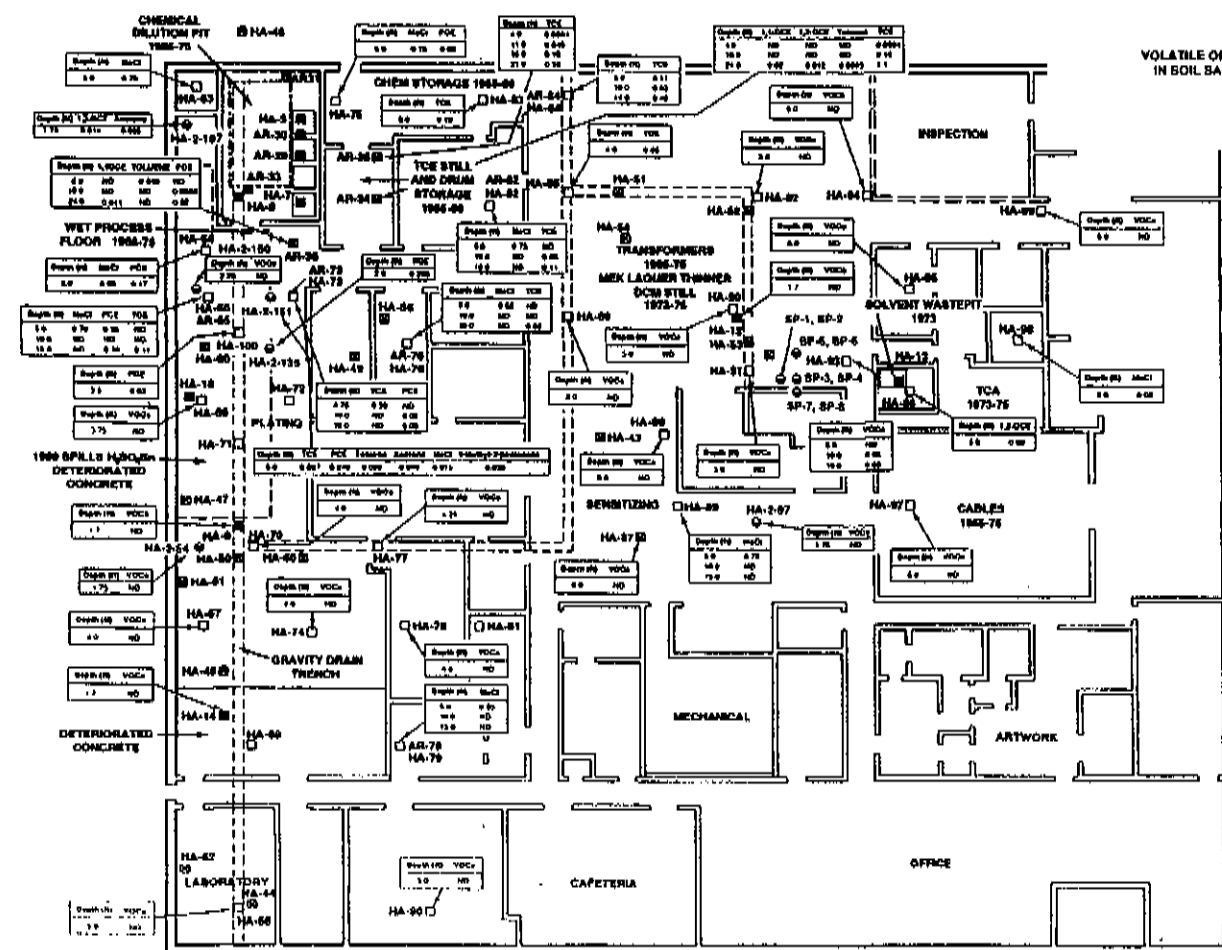


FIGURE 2.7
VOC CONCENTRATIONS IN SOIL VAPOR
INSIDE BUILDING 15





SEACOR

SECTION 3.0

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**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California

Boring Name: Sample Depth (ft):	AR-1 8.0	AR-1 16.5	AR-1 36.5	AR-3 6.0	AR-3 16.5	AR-3 26.0	AR-3 26.5	AR-3 36.5	AR-3 41.5	AR-4 5.5	AR-4 16.5
Chemical name											
1,1,1-trichloroethane	0.84	1.9	--	--	--	--	--	--	--	4.8	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	--	--	--	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	4.0	--	--
methylene chloride	--	--	--	--	--	--	--	2.7	--	--	--
styrene	--	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	--	--	--	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--	--
trichloroethene	--	--	--	0.51	2.9	2.2	1.3	1.6	25	2.5	--
xylenes, total	--	--	--	--	--	--	--	--	--	--	--
Total VOCs	0.84	1.9	--	0.51	2.9	2.2	1.3	4.3	29	7.3	--

NOTES:

"VOC" Volatile Organic Compounds

"--" Indicates below reporting limit.

A blank () indicates not analyzed.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name: Sample Depth (ft):	AR-4 26.5	AR-5 5.5	AR-5 16.5	AR-5 26.5	AR-6 5.5	AR-6 7.0	AR-6 8.5	AR-7 7.3	AR-7 8.5	AR-8 8.0	AR-8 10.0
Chemical name											
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	--	--	--	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--	--
methylene chloride	--	--	--	--	--	--	--	--	--	--	--
styrene	--	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	--	--	--	--	--	1.6	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--	--
trichloroethene	--	--	--	--	--	--	--	--	--	7.0	--
xylenes, total	--	--	--	--	--	--	--	--	--	--	--
Total VOCs	--	--	--	--	--	--	--	--	--	8.6	--

NOTES:
 "VOC" Volatile Organic Compounds
 "--" Indicates below reporting limit.
 A blank () indicates not analyzed.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name: Sample Depth (ft):	AR-9 6.5	AR-9 9.0	AR-10 14.5	AR-10 24.5	AR-10 29.5	AR-11 7.5	AR-11 14.1	AR-11 21.1	AR-11 28.3	AR-11 31.8	AR-13 14.8
Chemical name											
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	--	--	--	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--	--
methylene chloride	--	--	--	--	--	--	--	--	--	--	--
styrene	--	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	0.55	--	--	--	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--	--
trichloroethene	--	--	--	--	--	--	--	--	--	--	0.99
xylenes, total	--	--	--	--	--	--	--	--	--	--	--
Total VOCs	--	--	--	0.55	--	--	--	--	--	--	0.99

NOTES:

"VOC" Volatile Organic Compounds

"--" Indicates below reporting limit.

A blank () indicates not analyzed.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name: Sample Depth (ft):	AR-13 24.5	AR-13 34.5	AR-13 44.5	AR-14 10.0	AR-14 20.0	AR-14 30.0	AR-14 40.0	AR-15 15.0	AR-15 25.0	AR-15 40.0	AR-16 5.5
Chemical name											
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	--	--	--	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--	--
methylene chloride	--	--	--	--	--	--	--	--	--	--	--
styrene	--	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	--	--	--	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--	--
trichloroethene	--	--	--	--	7.2	2.9	--	0.71	4.3	--	0.018
xylenes, total	--	--	--	--	--	--	--	--	--	--	--
Total VOCs	--	--	--	--	7.2	2.9	--	0.71	4.3	--	0.018

NOTES:

"VOC" Volatile Organic Compounds

"--" Indicates below reporting limit.

A blank () indicates not analyzed.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name: Sample Depth (ft):	AR-16 15.5	AR-17 5.5	AR-17 15.5	AR-18 5.5	AR-18 10.5	AR-18 15.5	AR-18 20.5	AR-19 5.5	AR-19 10.5	AR-19 15.5	AR-19 20.5
Chemical name											
1,1,1-trichloroethane	--	--	--	--	--	0.02	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	0.012	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	0.0068	0.05	--	0.0068	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	0.012	0.012	--	0.028	0.029	--	--
4-methyl-2-pentanone	--	--	--	0.11	0.017	--	--	--	--	--	--
acetone	--	--	--	1.7	0.078	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	0.0056	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	0.14	--	--	--	--	--	--	--
methylene chloride	--	--	--	0.091	--	--	--	--	0.05	--	--
styrene	--	--	--	--	--	--	--	--	--	--	--
tetrachloroethane	--	--	0.0180	--	--	--	--	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	0.008	--	--
trichloroethene	0.46	0.02	4.7	0.38	0.23	2.0	--	0.21	0.39	1.8	3.8
xylene, total	--	--	--	--	--	--	--	--	--	--	--
Total VOCs	0.46	0.02	4.7	2.5	0.34	2.0	--	0.23	0.48	1.8	3.8

NOTES:

"VOC" Volatile Organic Compounds

-- Indicates below reporting limit.

A blank () indicates not analyzed.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name: Sample Depth (ft):	AR-20 5.0	AR-20 10.0	AR-20 20.0	AR-21 5.5	AR-21 15.5	AR-21 20.5	AR-22 5.5	AR-22 15.5	AR-22 25.5	AR-22 35.5	AR-23 10.5
Chemical name											
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	0.31	0.014	--	0.077	--	--	--	--	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--	--
methylene chloride	--	--	--	--	--	--	--	--	--	--	--
styrene	--	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	--	--	--	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--	--
toluene	--	--	0.0095	--	--	--	--	--	--	--	--
trichloroethene	0.62	0.069	0.12	0.39	0.14	--	--	0.012	--	--	0.20
xylenes, total	--	--	--	--	--	--	--	--	--	--	--
Total VOCs	0.93	0.083	0.13	0.47	0.14	--	--	0.012	--	--	0.20

NOTES:

"VOC" Volatile Organic Compounds

-- Indicates below reporting limit.

A blank () indicates not analyzed.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name: Sample Depth (ft):	AR-23 15.5	AR-23 20.5	AR-24 10.5	AR-24 15.5	AR-24 20.5	AR-25 10.5	AR-25 15.5	AR-25 20.5	AR-26 5.5	AR-26 15.5	AR-26 25.5
Chemical name											
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	0.0054	--	--	--	0.0081	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--	--
methylene chloride	--	--	--	--	--	--	--	--	--	--	--
styrene	--	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	--	--	--	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--	--
trichloroethene	0.15	1.1	0.43	0.078	0.12	0.11	1.7	2.0	0.016	0.12	0.20
xylenes, total	--	--	--	--	--	--	--	--	--	--	--
Total VOCs	0.15	1.1	0.43	0.078	0.12	0.12	1.7	2.0	0.016	0.12	0.20

NOTES:

"VOC" Volatile Organic Compounds

"--" Indicates below reporting limit.

A blank () indicates not analyzed.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name: Sample Depth (ft):	AR-27 10.5	AR-27 15.5	AR-28 5.5	AR-28 15.5	AR-28 20.5	AR-29 4.0	AR-29 6.5	AR-29 11.0	AR-29 16.0	AR-30 3.5	AR-30 11.0
Chemical name											
1,1,1-trichloroethane	--	0.0074	--	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	0.0078	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	--	--	--	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--	--
methylene chloride	--	--	--	0.7	--	--	--	--	--	--	--
styrene	--	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	0.01	--	--	--	--	--	0.005	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--	0.0093
trichloroethene	0.22	2.1	0.082	1.6	1.5	0.0055	--	0.034	0.053	--	0.0092
xylenes, total	--	--	--	--	--	--	--	--	--	--	--
Total VOCs	0.22	2.1	0.082	2.3	1.5	0.0055	0.04	0.039	0.053	--	0.018

NOTES:

"VOC" Volatile Organic Compounds

"--" Indicates below reporting limit.

A blank () indicates not analyzed.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name: Sample Depth (ft):	AR-30 20.5	AR-30 24.0	AR-31 3.0	AR-31 10.5	AR-31 14.5	AR-31 20.5	AR-32 3.5	AR-32 7.5	AR-33 3.5	AR-33 16.0	AR-33 21.0
Chemical name											
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	0.0078	--	--	--	--	--	--	--	--	--	0.0073
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane, total	--	--	--	--	--	--	--	--	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	0.61	0.037	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	2.2	--	--	--	--
methylene chloride	--	--	--	--	--	--	1.1	0.11	--	--	--
styrene	--	--	--	--	--	--	1.2	--	--	--	--
tetrachloroethene	--	--	--	--	--	--	0.24	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	0.082	--	--	--	--
trichloroethene	0.34	0.022	--	--	0.0051	0.7	1.9	0.017	--	--	0.57
xylene, total	--	--	--	--	--	--	--	--	--	--	--
Total VOCs	0.35	0.022	--	--	0.0051	0.7	7.3	0.16	--	--	0.58

NOTES:

"VOC" Volatile Organic Compounds

"--" Indicates below reporting limit.

A blank () indicates not analyzed.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name: Sample Depth (ft):	AR-34 4.0	AR-34 11.0	AR-34 16.0	AR-34 21.0	AR-35 4.0	AR-35 16.0	AR-35 21.0	AR-36 6.0	AR-36 16.0	AR-36 24.0	AR-37 5.0
Chemical name											
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	0.02	--	--	0.011	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	--	0.012	--	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--	0.035
bromomethane	--	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--	--
methylene chloride	--	--	--	--	--	--	--	--	--	--	0.045
styrene	--	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	--	--	--	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	0.0053	0.01	--	--	--
trichloroethene	0.0091	0.048	0.18	0.16	0.0064	0.16	1.1	--	0.0065	0.22	--
xylenes, total	--	--	--	--	--	--	--	--	--	--	--
Total VOCs	0.0091	0.048	0.18	0.16	0.0064	0.16	1.1	0.01	0.0065	0.23	0.08

NOTES:

"VOC" Volatile Organic Compounds

-- Indicates below reporting limit.

A blank () indicates not analyzed.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name: Sample Depth (ft):	AR-37 10.0	AR-37 14.5	AR-41 3.5	AR-41 6.0	AR-41 9.0	AR-41 12.0	AR-42 7.0	AR-42 10.0	AR-42 13.0	AR-43 3.0	AR-43 6.0
Chemical name											
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	0.12	0.04	--	0.03	0.03	0.04	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--
acetone	0.042	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--	--
methylene chloride	0.031	--	--	--	--	--	--	--	--	--	--
styrene	--	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	--	--	--	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--	--
trichloroethene	--	--	0.36	0.18	0.24	1.5	0.37	0.70	1.0	0.13	0.42
xylene, total	--	--	--	--	--	--	--	--	--	--	--
Total VOCs	0.073	--	0.48	0.22	0.24	1.5	0.4	0.74	1.0	0.13	0.42

NOTES:
 "VOC" Volatile Organic Compounds
 "--" Indicates below reporting limit.
 A blank () Indicates not analyzed.

Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name: Sample Depth (ft):	AR-43 9.0	AR-43 12.0	AR-44 6.0	AR-44 9.0	AR-44 12.0	AR-45 4.0	AR-45 7.0	AR-45 10.0	AR-45 12.0	AR-46 5.0	AR-46 15.0
Chemical name											
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	0.04	--	0.07	0.03	--	0.85	0.07	0.04	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--	--
methylene chloride	--	--	--	--	--	--	--	--	--	--	--
styrene	--	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	--	--	--	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--	--
trichloroethene	0.95	0.65	0.65	0.35	2.0	3.2	0.75	0.75	0.38	--	--
xylene, total	--	--	--	--	--	--	--	--	--	--	--
Total VOCs	0.99	0.65	0.72	0.38	2.0	4.1	0.82	0.79	0.38	--	--

NOTES:

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"--" Indicates below reporting limit.

A blank () indicates not analyzed.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name: Sample Depth (ft):	AR-46 25.0	AR-47 20.0	AR-47 30.0	AR-46 5.0	AR-48 10.0	AR-48 15.0	AR-48 20.0	AR-48 25.0	AR-49 15.0	AR-49 25.0	AR-50 11.0
Chemical name											
1,1,1-trichloroethane	--	--	0.08	0.75	0.46	0.47	0.12	0.39	--	--	0.15
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--	0.08
1,1-dichloroethene	--	--	0.09	0.14	0.10	0.05	--	0.12	--	--	0.07
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	--	--	0.06	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--	--
methylene chloride	--	--	--	--	--	--	--	0.95	--	0.32	1.6
styrene	--	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	--	--	--	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--	--
trichloroethene	--	--	--	--	--	--	--	--	--	--	--
xylene, total	--	--	--	--	--	--	--	--	--	--	--
Total VOCs	--	--	0.15	0.89	0.47	0.52	0.12	1.5	--	0.32	1.9

NOTES:

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"--" Indicates below reporting limit.

A blank () indicates not analyzed.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name: Sample Depth (ft):	AR-50 20.0	AR-50 30.0	AR-50 40.0	AR-65 10.0	AR-65 15.0	AR-73 10.0	AR-73 15.0	AR-76 10.0	AR-76 15.0	AR-79 10.0	AR-79 15.0
Chemical name											
1,1,1-trichloroethane	0.11	--	--	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	0.29	0.06	0.03	--	--	--	--	--	--	--	--
1,1-dichloroethene	0.03	--	0.05	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	--	--	--	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--	--
methylene chloride	5.5	1.8	2.6	--	--	--	--	--	--	--	--
styrene	--	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	0.10	0.06	0.09	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--	--
trichloroethene	--	--	--	--	0.11	--	--	--	0.05	--	--
xylenes, total	--	--	--	--	--	--	--	--	--	--	--
Total VOCs	5.9	1.86	2.68	--	0.21	0.06	0.09	--	0.05	--	--

NOTES:

"VOC" Volatile Organic Compounds

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A blank () indicates not analyzed.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name: Sample Depth (ft):	AR-82 10.0	AR-82 15.0	AR-84 10.0	AR-84 14.0	AR-89 10.0	AR-89 15.0	AR-93 10.0	AR-93 15.0
Chemical name								
1,1,1-trichloroethane	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--
methylene chloride	--	--	--	--	--	--	--	--
styrene	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--
trichloroethene	0.06	0.11	0.30	0.48	--	--	0.05	0.09
xylene, total	--	--	--	--	--	--	--	--
Total VOCs	0.06	0.11	0.30	0.48	--	--	0.05	0.09

NOTES:

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A blank () indicates not analyzed.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	MW-5 15.0	MW-6 25.0	MW-6 35.0	MW-6 40.0	MW-7 12.5	MW-7 17.0	MW-7 23.0	MW-7 29.0	MW-7 39.5	MW-8 20.0
Chemical name										
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	--	--	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--
bromomethane	1.7	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--
methylene chloride	--	--	--	--	--	--	--	--	--	--
styrene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	--	--	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--
trichloroethene	--	--	--	--	--	--	--	--	--	--
xylene, total	--	--	--	--	--	--	--	--	--	--
Total VOCs	1.7	--	--	--	--	--	--	--	--	--

NOTES:

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Total VOCs rounded to two significant figures.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	MW-8 30.0	MW-8 40.0	MW-9 10.0	MW-9 20.0	MW-10 14.5	MW-10 25.0	MW-10 29.5	MW-11 10.0	MW-11 20.0	MW-11 31.0
Chemical name										
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	--	--	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	3.3	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--
methylene chloride	--	--	--	--	--	--	--	--	--	--
styrene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	--	0.59	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--
trichloroethene	--	--	--	--	--	--	--	--	--	--
xylene, total	--	--	--	--	--	--	--	--	--	--
Total VOCs	--	--	--	3.3	--	0.59	--	--	--	--

NOTES:

"VOC" Volatile Organic Compounds

-- Indicates below reporting limit

Total VOCs rounded to two significant figures.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	MW-11 37.0	HA-1 0.3	HA-3 3.4	HA-5 0.8	HA-6 1.0	HA-7 1.0	HA-8 1.4	HA-9 1.7	HA-10 1.7	HA-12 1.7
Chemical name										
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	0.58	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	--	--	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	1.1	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--
methylene chloride	--	2.7	--	--	--	--	--	--	--	--
styrene	--	0.8	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	110	4.3	5.5	0.75	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--
trichloroethene	--	--	--	6.7	1.8	--	1.2	--	--	--
xylene, total	--	--	--	--	--	--	16	--	--	--
Total VOCs	--	4.1	--	120	6.1	5.5	19	--	--	--

NOTES:

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"--" Indicates below reporting limit

Total VOCs rounded to two significant figures.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	HA-13 0.8	HA-14 1.7	HA-15 2.8	HA-16 1.5	HA-16 6.0	HA-17 2.0	HA-17 7.0	HA-18 1.5	HA-18 6.0	HA-19 2.0
Chemical name										
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	0.039	--	--	--	0.064
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	0.84	--	0.45	0.052	0.9	0.011	0.45
4-methyl-2-pentanone	--	--	--	--	--	0.17	0.061	--	--	0.68
acetone	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	0.05
ethylbenzene	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--
methylene chloride	--	--	--	--	--	--	--	--	--	--
styrene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	--	0.02	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	0.19	--	--	--	--
trichloroethene	--	--	3.3	0.036	0.078	19.0	1.5	0.69	0.047	13.0
xylene, total	--	--	--	--	--	0.046	--	--	--	0.03
Total VOCs	--	--	3.3	0.88	0.078	19.9	1.6	1.6	0.058	14

NOTES:

"VOC" Volatile Organic Compounds

--" Indicates below reporting limit

Total VOCs rounded to two significant figures.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	HA-19 7.0	HA-20 6.5	HA-21(BH-7) 1.5	HA-21(BH-7) 5.5	HA-21(BH-7) 11.0	HA-21(BH-7) 16.0	HA-22 9.0
Chemical name							
1,1,1-trichloroethane	--	0.006	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--
1,1-dichloroethane	--	0.034	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	0.086	--	--	--	--
4-methyl-2-pentanone	0.17	--	--	--	--	0.3	--
acetone	--	0.68	6.1	--	--	--	--
bromomethane	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--
methylene chloride	--	--	--	--	--	--	--
styrene	--	--	--	--	--	--	--
tetrachloroethene	--	--	0.05	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--
toluene	--	--	0.074	--	--	--	--
trichloroethene	0.088	--	1.5	0.94	0.28	1.3	0.071
xylene, total	--	--	--	--	--	0.0072	--
Total VOCs	0.26	0.72	7.8	0.94	0.28	1.6	0.071

NOTES:

"VOC" Volatile Organic Compounds

"--" Indicates below reporting limit

Total VOCs rounded to two significant figures.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	HA-23 9.0	HA-24 6.5	HA-25 10.0	HA-26 3.5	HA-26 11.0	HA-27 9.0	HA-28 6.5	HA-29 1.5	HA-29 6.5	HA-30 6.0
Chemical name										
1,1,1-trichloroethane	2.5	--	--	--	--	--	--	--	0.025	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	0.64	0.041	0.32	--	--	--	--	--	--	--
1,1-dichloroethene	0.047	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	0.027	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	0.031	0.11	--	--	--	--	0.14	0.025	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--
methylene chloride	19.0	--	--	--	--	--	--	--	--	--
styrene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	--	--	--	0.028	0.31	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--
toluene	0.16	0.46	0.084	--	--	--	--	0.16	0.11	--
trichloroethene	0.069	--	--	1.8	--	0.44	--	9.0	5.0	0.031
xylenes, total	--	--	--	--	--	--	--	--	--	--
Total VOCs	22	0.53	0.51	1.8	--	0.44	--	9.3	5.6	0.031

NOTES:

"VOC" Volatile Organic Compounds

"--" Indicates below reporting limit

Total VOCs rounded to two significant figures.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**

Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	HA-31 3.0	HA-32 6.5	HA-33 6.5	HA-34 6.5	HA-35 3.0	HA-35 8.5	HA-36 2.5	HA-36 8.0	HA-37 10.0	HA-38 10.0
Chemical name										
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	0.55	--	0.65	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--
methylene chloride	--	--	--	--	--	--	--	--	--	--
styrene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	--	--	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--
trichloroethene	--	0.09	0.1	--	31	--	2.5	--	0.57	--
xylenes, total	--	--	--	--	--	--	--	--	--	--
Total VOCs	--	0.09	0.1	--	32	--	3.2	--	0.57	--

NOTES:

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Total VOCs rounded to two significant figures.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**

Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	HA-39 9.0	HA-41 6.0	HA-63 5.0	HA-64 5.0	HA-65 5.0	HA-66 3.75	HA-67 4.0	HA-68 5.0	HA-70 4.0	HA-71 3.75
Chemical name										
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	--	--	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--
methylene chloride	--	--	0.7	0.6	0.70	--	--	--	--	--
styrene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	0.17	0.26	--	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--
toluene	--	0.11	--	--	--	--	--	--	--	--
trichloroethene	--	0.67	--	--	--	--	--	--	--	--
xylenes, total	--	--	--	--	--	--	--	--	--	--
Total VOCs	--	0.78	0.7	0.77	0.96	--	--	--	--	--

NOTES:

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Total VOCs rounded to two significant figures.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**

Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	HA-72 4.25	HA-73 4.75	HA-74 4.0	HA-75 5.0	HA-76 5.0	HA-77 4.25	HA-78 4.5	HA-79 5.0	HA-80 5.0	HA-81 5.0
Chemical name										
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	--	--	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--
methylene chloride	--	--	--	0.75	0.85	--	--	0.55	--	--
styrene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	0.30	--	--	--	--	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--
trichloroethene	--	--	--	0.08	--	--	--	--	--	--
xylenes, total	--	--	--	--	--	--	--	--	--	--
Total VOCs	--	0.30	--	0.83	0.85	--	--	0.55	--	--

NOTES:

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Total VOCs rounded to two significant figures.

Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	HA-82 5.0	HA-83 5.0	HA-84 5.0	HA-85 4.0	HA-86 5.0	HA-87 5.0	HA-88 5.0	HA-89 5.0	HA-90 5.0	HA-91 5.0
Chemical name										
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	--	--	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--
methylene chloride	0.75	--	--	--	--	--	--	0.75	--	--
styrene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	--	--	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--
trichloroethene	--	0.19	0.11	0.06	--	--	--	--	--	--
xylenes, total	--	--	--	--	--	--	--	--	--	--
Total VOCs	0.75	0.19	0.11	0.06	--	--	--	0.75	--	--

NOTES:

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Total VOCs rounded to two significant figures.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**

Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	HA-92 5.0	HA-93 5.0	HA-94 5.0	HA-95 5.0	HA-96 5.0	HA-97 6.0	HA-98 5.0	HA-99 5.0	HA-100 3.5	HA-P8 1.5
Chemical name										
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	0.03	--	0.03	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--
methylene chloride	--	--	--	--	--	--	--	--	--	--
styrene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	--	--	--	--	0.3	0.26
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--
trichloroethene	--	--	--	--	--	--	--	--	--	0.15
xylenes, total	--	--	--	--	--	--	--	--	--	--
Total VOCs	--	--	--	--	0.03	--	0.03	--	0.3	0.41

NOTES:

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**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**

Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	HA-P10 1.0	HA-P12 3.0	HA-P13 1.5	HA-P14 4.0	HA-P15 1.0	HA-P6 1.0	HA-P4 2.0	HA-P2 2.0	HA-2-54 1.75	HA-2-97 1.75
Chemical name										
1,1,1-trichloroethane	--	--	--	--	--	0.07	0.06	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	--	--	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--
methylene chloride	--	--	--	--	--	--	--	--	--	--
styrene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	0.06	0.05	0.05	--	0.55	1.2	12	0.16	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--
trichloroethene	0.10	0.05	--	--	0.38	1.4	8.0	0.25	--	--
xylene, total	--	--	--	--	--	--	--	--	--	--
Total VOCs	0.16	0.10	0.05	--	0.91	2.7	20	0.41	--	--

NOTES:

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"--" Indicates below reporting limit

Total VOCs rounded to two significant
figures.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	HA-2-135 2.0	HA-2-150 2.0	HA-2-151 3.0	HA-2-197 1.8
Chemical name				
1,1,1-trichloroethane	--	--	--	--
1,1,2-trichloroethane	--	--	--	--
1,1-dichloroethane	--	--	--	--
1,1-dichloroethene	--	--	--	--
1,2-dichloroethane	--	--	--	--
1,2-dichloroethene, total	--	--	--	0.014
4-methyl-2-pentanone	--	--	0.039	--
acetone	--	--	0.049	0.055
bromomethane	--	--	--	--
chlorobenzene	--	--	--	--
ethylbenzene	--	--	--	--
2-butanone	--	--	--	--
methylene chloride	--	--	0.015	--
styrene	--	--	--	--
tetrachloroethene	0.26	--	0.24	--
tetrahydrofuran	--	--	--	--
toluene	--	--	0.008	--
trichloroethene	--	--	0.007	--
xylene, total	--	--	--	--
Total VOCs	0.26	--	0.35	0.069

NOTES:

"VOC" Volatile Organic Compounds

"--" indicates below reporting limit

Total VOCs rounded to two significant figures.

Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name: Sample Depth (ft):	BH-1 9.0	BH-2 10.0	BH-3 10.0	BH-4 5.0	BH-5 5.0	BH-6 5.0	BH-7	BH-8 7.0	BH-8 14.0
Chemical Name									
1,1,1-trichloroethane	--	--	--	--	--	--		0.860	0.088
1,1,2-trichloroethane	--	--	--	--	--	--		0.065	--
1,1-dichloroethane	--	--	--	--	--	--	see	0.030	--
1,1-dichloroethane	--	--	--	--	--	--		0.035	--
1,2-dichloroethane	--	--	--	--	--	--		--	--
1,2-dichloroethane, total	--	--	--	--	--	--	HA-21	--	--
4-methyl-2-pentanone	--	--	--	--	--	--		--	--
acetone	--	--	--	--	--	--		--	0.28
bromomethane	--	--	--	--	--	--		--	--
chlorobenzene	--	--	--	--	--	--		--	--
ethylbenzene	--	--	--	--	--	--		--	--
2-butanone	--	--	--	--	--	--		--	--
methylene chloride	--	--	--	--	--	--		0.89	1.0
styrene	--	--	--	--	--	--		--	--
tetrachloroethene	--	0.047	--	--	--	--		--	--
tetrahydrofuran	--	--	--	--	--	--		--	--
toluene	0.033	0.025	--	0.026	0.15	--		0.52	0.26
trichloroethene	0.076	0.038	0.15	0.076	0.04	--		0.085	0.038
xylene, total	--	--	--	--	--	--		--	--
Total VOCs	0.11	0.11	0.15	0.10	0.19			2.5	1.7

NOTES:

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**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name: Sample Depth (ft):	Background-3 3.5	1 5.75	1 10.25	2 5.75	2 10.25	3 6.0	3 10.75	4 10.75	5 5.5
Chemical Name									
1,1,1-trichloroethane	--	--	--	--	--	0.05	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	--	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--
methylene chloride	--	--	--	--	--	--	--	--	--
styrene	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	0.11	--	--	--	2.9	0.70	2.4	0.06
tetrahydrofuran	--	--	--	--	--	--	--	--	--
toluene	0.45	--	--	--	--	--	--	--	--
trichloroethene	--	0.17	--	--	--	0.28	0.85	0.70	--
xylenes, total	--	--	--	--	--	--	--	--	--
Total VOCs	0.45	0.28	--	--	--	3.2	1.6	3.1	0.06

NOTES:

"VOC" Volatile Organic Compounds

"--" Indicates below reporting limit.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name: Sample Depth (ft):	6 5.5	7 10.75	8 6.0	8 11.0	#1 14.75	#2 15.0	BH #3 17.0	BH #4 17.0	BH #5 15.5	BH #6 15.0
Chemical Name										
1,1,1-trichloroethane	--	--	0.31	--	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	--	--	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--
methylene chloride	--	--	--	--	--	--	--	--	--	--
styrene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	--	0.13	5.5	0.13	--	--	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--
trichloroethene	--	0.10	0.46	0.15	--	0.016	0.0099	0.011	0.0059	--
xylenes, total	--	--	--	--	--	--	--	--	--	--
Total VOCs	--	0.23	6.3	0.28	--	0.016	0.0099	0.011	0.0059	--

NOTES:

"VOC" Volatile Organic Compounds

"--" Indicates below reporting limit.

Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL SAMPLES
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name: Sample Depth (ft):	BH #7 15.0	BH #8 17.0	#9 14.5	#10 14.8	BH #11 17.0	BH #12 17.0
Chemical Name						
1,1,1-trichloroethane	--	--	--	--	--	--
1,1,2-trichloroethane	--	--	--	--	--	--
1,1-dichloroethane	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--
1,2-dichloroethane	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	--
4-methyl-2-pentanone	--	--	--	--	--	--
acetone	--	--	0.025	--	--	--
bromomethane	--	--	--	--	--	--
chlorobenzene	--	--	--	--	--	--
ethylbenzene	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--
methylene chloride	--	--	--	--	--	--
styrene	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	--	--
tetrahydrofuran	--	--	--	--	--	--
toluene	--	--	--	--	--	--
trichloroethene	0.0085	--	0.0087	0.013	0.0087	0.0058
xylenes, total	--	--	--	--	--	--
Total VOCs	0.0085	--	0.033	0.013	0.0087	0.0058

NOTES:

"VOC" Volatile Organic Compounds

"--" Indicates below reporting limit.

Summary of METALS, CYANIDE and pH
detected in SOIL SAMPLES
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	AR-1 6.0	AR-1 16.5	AR-1 33.5	AR-3 6.0	AR-3 16.5	AR-3 26.0	AR-3 36.5	AR-3 41.5	AR-4 1.2	AR-4 5.5
Chemical name										
antimony				--					--	--
arsenic				--					--	--
barium				110					35	120
beryllium				--					--	--
cadmium				--					--	0.56
chromium III										
chromium VI										
chromium, total				150					73	69
cobalt				22					25	15
copper				44					83	33
cyanide				--					--	--
lead				--					--	--
mercury				--					--	--
molybdenum				--					0.84	0.49
nickel				150					--	--
selenium				--					62	68
silver				--					--	--
thallium				--					--	--
tin				--					--	--
vanadium				92					99	66
zinc				58					59	42
pH	7.0	6.8	8.0	7.3	7.1	6.8	7.1	7.6	8.1	7.5

NOTES:

-- Indicates below reporting limit.

(1) Depth below concrete (ft)

A blank () indicates not analyzed.

Summary of METALS, CYANIDE and pH
detected in SOIL SAMPLES
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	AR-5 1.0	AR-5 5.5	AR-7 7.3	AR-7 8.5	AR-8 8.0	AR-8 10.0	AR-9 6.5	AR-9 9.0	AR-29 4.0	AR-29 6.5
Chemical name										
antimony	--	--	--	--	--	--			--	
arsenic	--	--	--	--	--	--			--	
barium	62	130	62	--	--	--			--	
beryllium	--	--	--	--	--	104			84	
cadmium	--	0.88	--	--	--	0.55			--	
chromium III	--	--	--	--	--	0.65			--	
chromium VI	--	--	--	--	--	--			--	
chromium, total	68	92	51	--	3.1	90			--	
cobalt	18	30	13	--	5.8	20			88	
copper	54	61	170	--	69	41			18	
cyanide	--	--	--	--	12	--			29	
lead	--	--	--	--	--	--			--	
mercury	0.35	0.13	--	--	--	--			--	
molybdenum	--	--	--	--	--	--			0.14	
nickel	55	110	75	--	49	104			14	
selenium	--	--	--	--	--	--			98	
silver	--	--	--	--	--	--			--	
thallium	--	--	--	--	--	--			1.0	
tin	--	--	--	--	--	--			--	
vanadium	76	78	51	--	31	--			--	
zinc	46	59	66	--	23	83			67	
					48				46	
pH	7.9	7.5	12	8.4	9.6	8.1	7.4	6.8	7.9	7.0

NOTES:

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(1) Depth below concrete (ft)

A blank () Indicates not analyzed.

Summary of METALS, CYANIDE and pH
detected in SOIL SAMPLES
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	AR-30 3.5	AR-30 6.5	AR-31 3.0	AR-31 5.5	AR-32 3.5	AR-33 3.5	AR-34 4.0	AR-34 6.5	AR-35 3.5	AR-35 3.5 (STLC)
antimony	--		--	--	--	--			--	--
arsenic	1.6		1.7	1.6	--	1.2			1.6	--
barium	90		190	140	13	120			110	--
beryllium	--		--	--	--	15			--	--
cadmium	--		--	--	--	--			--	--
chromium III										
chromium VI	--		--						--	
chromium, total	150		85	120	2.4	100			130	0.02
cobalt	26		25	30	--	32			28	--
copper	41		30	36	12	27			42	3.9
cyanide										
lead	--		--	--	11	--			5.6	
mercury	--		--	--	--	--			--	
molybdenum	--		--	--	--	--			--	
nickel	130		110	98	15	120			120	13
selenium	--		--	--	--	--			--	
silver	1.0		--	--	--	--			1.4	
thallium	--		--	--	--	--			--	
tin										
vanadium	77		72	100	--	88			110	
zinc	63		43	55	50	82			98	
pH	7.3	7.4	7.3	6.9	8.4	7.6	8.0	7.3	7.1	

NOTES:

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(1) Depth below concrete (ft)

A blank () indicates not analyzed.

**Summary of METALS, CYANIDE and pH
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	AR-38 6.0	AR-38 10.0	AR-38 15.0	AR-38 20.0	AR-39 7.5	AR-39 9.5	AR-39 16.0	AR-39 21.0	AR-39 26.0	AR-39 31.0
Chemical name										
antimony	--	--	--	--	--	--				
arsenic	2.3	2.2	--	--	2.5	1.6				
barium	240	100	--	--	170	110				
beryllium	2.8	1.7	--	--	2.2	1.9				
cadmium	--	--	--	--	--	--				
chromium III										
chromium VI										
chromium, total	170	110	--	--	150	100				
cobalt	54	20	--	--	35	24				
copper	59	40	--	--	54	54				
cyanide										
lead	3.4	2.3	--	--	2.6	2.4				
mercury	--	--	--	--	--	--				
molybdenum	--	--	--	--	--	--				
nickel	220	90	--	--	130	120				
selenium	--	--	--	--	--	--				
silver	--	--	--	--	--	--				
thallium	--	--	--	--	--	--				
tin										
vanadium	140	92	--	--	120	96				
zinc	90	54	--	--	70	59				
pH	7.3	6.7	7.2	7.6	7.9	7.4	6.4	7.2	7.8	7.3

NOTES:

"--" Indicates below reporting limit.

(1) Depth below concrete (ft)

A blank () Indicates not analyzed.

**Summary of METALS, CYANIDE and pH
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	AR-40 6.0	AR-40 9.0	AR-40 14.0	AR-40 19.5	AR-40 24.0	HA-1 0.3	HA-3 3.4	HA-5 0.8	HA-6 1.0	HA-6 1.0 (STLC)
antimony	--	--					--	--	--	--
arsenic	3.3	3.3					--	--	--	--
barium	200	200					96	46	52	2.1
beryllium	2.7	2.7					--	--	--	--
cadmium	--	--					--	--	0.54	--
chromium III										
chromium VI	--	--								
chromium, total	170	170					87	58	92	2.5
cobalt	69	69					20	19	27	0.55
copper	55	55					29	71	320	1.9
cyanide										
lead	2.7	2.7					--	--	--	--
mercury	--	--					--	--	--	--
molybdenum	--	--					--	--	--	--
nickel	210	210					80	50	480	1.9
selenium	--	--					--	--	--	--
silver	--	--					--	--	--	--
thallium	--	--					--	--	--	--
tin								17	34	34
vanadium	130	130					55	79	45	--
zinc	78	70					40	48	38	0.74
pH	8.1	7.3	7.7	5.7	7.7	8.2	8.6	12	12	

NOTES:

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(1) Depth below concrete (ft)

A blank () Indicates not analyzed.

Summary of METALS, CYANIDE and pH
detected in SOIL SAMPLES
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	HA-7 1.0	HA-8 1.4	HA-9 1.7	HA-10 1.7	HA-14 2.2	HA-15 2.8	HA-20 6.5	HA-23 9.0	HA-24 6.5	HA-25 10.0
Chemical name										
antimony	--	--	--	--	--	--				
arsenic	--	--	--	--	--	--				
barium	54	120	90	55	13	150				
beryllium	--	--	--	--	--	--				
cadmium	--	--	--	--	--	--				
chromium III										
chromium VI										
chromium, total	81	80	100	56	3.5	110				
cobalt	17	66	19	69	--	78				
copper	68	180	51	86	85	49				
cyanide										
lead	--	8.4	--	12	--	--				
mercury	--	--	--	--	--	--				
molybdenum	--	--	--	--	--	--				
nickel	80	94	110	300	6.8	95				
selenium	--	--	--	--	--	--				
silver	--	--	--	--	--	--				
thallium	--	--	--	--	--	--				
tin	9.5	8.1	--	--	--	--				
vanadium	69	61	71	64	--	120				
zinc	44	43	40	63	7.7	52				
pH	12	11	7.0	9.1	4.1	8.3	9.6	7.2	7.4	6.9

NOTES:

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(1) Depth below concrete (ft)

A blank () indicates not analyzed.

Summary of METALS, CYANIDE and pH
detected in SOIL SAMPLES
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	HA-34 6.5	HA-41 6.0	HA-41 6.0 (STLC)	HA-42 1.5	HA-42 2.5	HA-42 4.5	HA-43 2.0	HA-44 1.5	HA-44 2.5	HA-45 2.0
Chemical name										
antimony	--	5.8	--	--			--	--	--	--
arsenic	--	1.8	--	--			--	--	--	--
barium	81	64	--	33			26	1.3	--	1.5
beryllium	--	--	--	6.1			4.7	40	--	110
cadmium	--	--	--	--			--	4.4	--	2.9
chromium III	92	22					--	--	--	--
chromium VI	--									
chromium, total	--	--	--	100			73	87	--	82
cobalt	--	--	--	44			38	36	--	24
copper	26	240	20	110			90	100	--	38
cyanide										
lead	--	720	5	--			--	--	--	4
mercury	--	--	--	--			--	--	--	--
molybdenum	--	--	--	--			--	--	--	--
nickel	71	71	20	66			55	55	--	64
selenium	--	--	--	--			--	--	--	--
silver	--	--	--	9.3			6.6	6.8	--	3.9
thallium	--	--	--	--			--	--	--	--
tin										
vanadium	63	29	24	140			93	100	--	78
zinc	34	60	--	66			60	61	--	36
pH	7.5	7.9		8.0	7.3	7.1	7.7	8.8	8.5	7.0

NOTES:

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(1) Depth below concrete (ft)

A blank () indicates not analyzed.

**Summary of METALS, CYANIDE and pH
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	HA-45 3.5	HA-45 5.0	HA-46 1.5	HA-46 2.5	HA-47 2.0	HA-47 3.0	HA-48 2.0	HA-48 1.5	HA-49 3.0	HA-49 4.5
Chemical name										
antimony			--		--		--	--		
arsenic			1.5		1.6		2.4	2.0		
barium			130		76		130	81		
beryllium			3.6		2.5		4.8	3.3		
cadmium			--		--		--	--		
chromium III										
chromium VI										
chromium, total			79		75		--	100		
cobalt			27		18		32	30		
copper			33		42		42	54		
cyanide										
lead			4.1		4.0		4.5	4.3		
mercury			--		--		--	--		
molybdenum			--		--		--	--		
nickel			63		49		86	93		
selenium			--		--		--	--		
silver			4.4		3.1		6.0	4.7		
thallium			--		--		--	--		
tin										
vanadium			83		71		97	90		
zinc			48		39		55	45		
pH	5.0	7.4	7.4	7.7	7.7	7.8	7.8	7.5	7.2	7.6

NOTES:

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(1) Depth below concrete (ft)

A blank () Indicates not analyzed.

**Summary of METALS, CYANIDE and pH
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	HA-50 2.0	HA-51 1.5	HA-51 2.5	HA-51 4.5	HA-52 1.5	HA-52 2.5	HA-52 5.0	HA-53 2.0	HA-53 3.0	HA-54 2.5
Chemical name										
antimony	--	--			--			--		--
arsenic	1.9	1.4			1.2			1.2		--
barium	110	94			120			36		19
beryllium	3.6	3.2			2.8			6.2		5.1
cadmium	--	--			--			--		--
chromium III										
chromium VI										
chromium, total	86	120			92			100		82
cobalt	36	33			24			54		39
copper	170	32			40			100		110
cyanide										
lead	4.1	5.6			4.2			--		--
mercury	--	--			--			--		--
molybdenum	5.8	--			--			--		--
nickel	130	80			96			62		51
selenium	--	--			--			--		--
silver	4.9	--			--			9.9		8.0
thallium	--	--			--			--		--
tin										
vanadium	77	89			63			140		110
zinc	45	39			49			71		64
pH	8.3	6.9	7.2	7.6	7.5	6.1	7.3	8.7	8.7	8.4

NOTES:

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(1) Depth below concrete (ft)

A blank () indicates not analyzed.

Summary of METALS, CYANIDE and pH
detected in SOIL SAMPLES
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	HA-64 3.5	HA-54 5.5	HA-55 3.0	HA-55 4.0	HA-55 5.5	HA-56 1.5	HA-56 2.5	HA-57 1.5	HA-57 2.5	HA-57 4.0
Chemical name										
antimony			--			--		--		
arsenic			--			1.4		2.1		
barium			26			66		130		
beryllium			4.9			2.5		4.5		
cadmium			--			--		--		
chromium (II)										
chromium VI										
chromium, total			74			91		130		
cobalt			39			20		29		
copper			96			39		690		
cyanide										
lead			--			--		4.2		
mercury			--			--		--		
molybdenum			--			--		--		
nickel			56			81		180		
selenium			--			--		--		
silver			7.7			3.4		6.2		
thallium			--			--		--		
tin			--			--		--		
vanadium			94			60		120		
zinc			62			38		61		
pH	7.3	7.0	8.5	9.8	8.1	7.6	7.4	5.5	5.9	5.5

NOTES:

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(1) Depth below concrete (ft)

A blank () indicates not analyzed.

Summary of METALS, CYANIDE and pH
detected in SOIL SAMPLES
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	HA-58 1.5	HA-58 3.0	HA-58 4.5	HA-59 1.5	HA-59 3.0	HA-60 2.0	HA-60 3.0	HA-61 1.5	HA-61 3.0	HA-61 4.5
Chemical name										
antimony	--			--		--		--		
arsenic	--			1.5		1.9		1.7		
barium	38			100		130		120		
beryllium	4.8			3.7		3.7		3.1		
cadmium	--			--		--		--		
chromium III										
chromium VI										
chromium, total	86			130		130		110		
cobalt	47			37		38		29		
copper	96			62		37		35		
cyanide										
lead	--			--		4.0		4.2		
mercury	--			--		--		--		
molybdenum	--			6.8		--		--		
nickel	--			110		140		120		
selenium	--			--		--		--		
silver	7.0			5.1		4.8		4.2		
thallium	--			--		--		--		
tin	--			--		--		--		
vanadium	110			110		100		77		
zinc	62			51		48		41		
pH	7.1	7.2	7.3	8.6	8.7	7.5	6.9	7.9	8.1	8.5

NOTES:

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(1) Depth below concrete (ft)

A blank () indicates not analyzed.

Summary of METALS, CYANIDE and pH
detected in SOIL SAMPLES
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	HA-62 1.5	HA-62 2.5	HA-P2 1.0	HA-P4 2.0	HA-P8 1.0	HA-P8 1.5	HA-P10 1.0	HA-P12 3.0	HA-P13 1.5	HA-P14 4.0
Chemical name										
antimony	--	--	--	--	--	--	--	--	--	--
arsenic	--	--	--	--	--	--	--	2.1	2	1.9
barium	22	--	100	110	100	110	120	110	120	110
beryllium	7.2	--	1	1	1	2	2	1.8	2	1.7
cadmium	--	--	--	--	--	--	--	--	--	--
chromium III										
chromium VI										
chromium, total	100	--	98	110	101	104	100	96	94	120
cobalt	46	--	19	22	22	30	29	21	26	27
copper	290	--	42	97	76	57	54	36	38	30
cyanide										
lead	--	--	4	3	3	4	3	2.9	2.7	3.5
mercury	--	--	--	--	--	0.6	--	--	--	--
molybdenum	--	--	--	--	--	--	--	--	--	--
nickel	310	--	77	98	97	110	110	100	110	110
selenium	--	--	--	--	--	--	--	--	--	--
silver	9.4	--	1	2	2	2	2	--	--	--
thallium	--	--	--	--	--	--	--	--	--	--
tin										
vanadium	140	--	80	79	79	120	110	88	97	91
zinc	71	--	48	50	64	60	57	49	50	53
pH	7.1	7.6								

NOTES:

"--" Indicates below reporting limit.

(1) Depth below concrete (ft)

A blank () Indicates not analyzed.

**Summary of METALS, CYANIDE and pH
detected in SOIL SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	HA-15 1.0	BH-8 7.0	BH-8 14.0	Background-1 0.4	Background-2 1.0	Background-3 3.5	SP-1 0.5	SP-1 0.5
Chemical name								
antimony	--	--	--	--	--	--	--	--
arsenic	2	--	--	--	--	1.8	--	--
barium	120	--	--	22	120	110	33	31
beryllium	1.9	--	--	--	--	--	--	--
cadmium	--	--	--	--	--	--	--	--
chromium III								
chromium VI						0.80	--	--
chromium, total	120	--	--	23	81	63	42	42
cobalt	29	--	--	11	17	--	11	11
copper	50	--	--	28	24	21	820	940
cyanide								
lead	2.7	--	--	6.7	5.4	23	--	--
mercury	--	--	--	0.53	--	--	--	--
molybdenum	--	--	--	--	--	--	--	--
nickel	160	--	--	18	59	28	36	35
selenium	--	--	--	--	--	--	--	--
silver	--	--	--	--	--	--	--	--
thallium	--	--	--	--	--	--	--	--
tin								
vanadium	95	--	--	55	74	58	50	47
zinc	59	--	--	57	31	41	59	60
pH		4.4	7.7	7.1	7.2	6.5	11	

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A blank () indicates not analyzed.

Summary of METALS, CYANIDE and pH
detected in SOIL SAMPLES
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring name : Sample depth (ft) :	SP-2 1.25	SP-3 3.0	SP-3 3.0	SP-4 4.25	SP-5 1.25	SP-6 2.75	SP-7 1.5	SP-8 3.0
Chemical name								
antimony	--	--	--	--	--	--	--	--
arsenic	--	--	--	--	--	--	--	--
barium	23	--	--	18	20	110	20	20
beryllium	1.5	--	--	1.6	1.7	--	1.9	1.2
cadmium	--	--	--	--	--	--	--	--
chromium III	--	--	--	--	--	--	--	--
chromium VI	--	--	--	--	--	--	--	--
chromium, total	75	6.2	6.9	95	110	110	82	74
cobalt	21	--	--	25	26	24	24	22
copper	120	1000	1300	85	85	51	69	84
cyanide	--	--	--	--	--	--	--	--
lead	--	1	1	--	--	3.4	1.2	--
mercury	--	--	--	--	--	--	--	0.1
molybdenum	--	--	--	5.3	5.6	--	5.5	--
nickel	54	8.4	9.1	58	65	92	60	44
selenium	--	--	--	--	--	--	--	--
silver	--	--	--	--	--	--	--	--
thallium	--	--	--	--	--	--	--	--
tin	--	--	--	--	--	--	--	--
vanadium	92	7.8	8.6	110	120	76	100	84
zinc	56	20	19	49	53	51	60	45
pH	10							

NOTES:

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(1) Depth below concrete (ft)

A blank () Indicates not analyzed.

Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL VAPOR SAMPLES
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name:	SV-1	SV-2	SV-3	SV-4	SV-5	SV-6	SV-7	SV-8	SV-9
Chemical name									
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	.003-0.01	--	--	--	--	--	--	--	--
1,1-DCE/methylene chloride	--	--	--	--	--	--	--	0.044-0.05/ 0.245-0.290	--
tetrachloroethene	--	0.005	--	--	--	--	0.016	2.8-4.6	--
trichloroethene	--	--	0.015	--	--	--	--	0.25-0.30	0.03
Total VOCs	0.01	0.005	0.015	--	--	--	0.016	5.19	0.03

NOTES:

"VOC" Volatile Organic Compounds

"--" Indicates below reporting limit

Values originally reported in ug/l
have been corrected to ppm.

Total VOCs were calculated
using upper limit of range values.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL VAPOR SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name:	SV-10	SV-11	SV-12	SV-13	SV-14	SV-15	SV-16	SV-17
Chemical name								
1,1,1-trichloroethane	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	0.003-0.01	0.008	0.175	--	0.004
1,1-DCE/methylene chloride	--	--	--	--	--	--	--	--
tetrachloroethene	--	--	--	--	--	0.355-2.44	--	1.0-3.3
trichloroethene	0.064	0.34-1.0	--	--	--	0.064-3.0	--	4.0-7.0
Total VOCs	0.064	1	--	0.01	0.008	5.615	--	10.304

NOTES:

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Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL VAPOR SAMPLES
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name:	SV-18	SV-19	SV-20	SV-21	SV-22	SV-23	SV-24	SV-25	SV-26
Chemical name									
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	--	--	--	--	--	--	--	--
1,1-DCE/methylene chloride	--	--	--	--	--	0.01/0.056	--	--	--
tetrachloroethene	0.15-0.35	--	--	--	--	--	--	0.03	--
trichloroethene	--	--	--	--	--	0.194	--	--	--
Total VOCs	0.35	--	--	--	--	0.26	--	0.03	--

NOTES:

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Total VOCs were calculated

using upper limit of range values.

Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL VAPOR SAMPLES
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name:	SV-27	SV-28	SV-29	SV-30	SV-31	SV-32	SV-33	SV-34	SV-35
Chemical name									
1,1,1-trichloroethane	--	--	--	--	--	--	--	--	--
1,2-dichloroethene, total	--	0.018-0.044	--	0.01	--	--	--	--	--
1,1-DCE/methylene chloride	--	--	--	0.007-0.015/ 0.04	--	--	0.008	--	--
tetrachloroethene	--	--	--	--	--	--	--	--	--
trichloroethene	--	--	--	--	--	--	--	--	--
Total VOCs	--	0.044	--	0.05	--	--	0.008	--	--

NOTES:

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Values originally reported in ug/l
have been corrected to ppm.
Total VOCs were calculated
using upper limit of range values.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL VAPOR SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name:	SV-36	SV-37	SV-38	SV-39	SV-40	SV-41	SV-42	SV-43	SV-44A
Chemical name									
1,1,1-trichloroethane	--	--	--	--	--	370	12,920	1,060	1.2
1,2-dichloroethene, total	--	--	--	--	2,848	--	--	--	--
1,1-DCE/methylene chloride	0.003/0.017	--	--	--	503	932	630	103	2.7
tetrachloroethene	--	--	--	--	89	--	1	--	--
trichloroethene	--	--	--	--	7,360	8	40	1	--
Total VOCs	0.017	--	--	--	16,800	1310	13,591	1,164	3.9

NOTES:

"VOC" Volatile Organic Compounds

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Values originally reported in ug/l
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Total VOCs were calculated
using upper limit of range values.

**Summary of VOLATILE ORGANIC COMPOUNDS
detected in SOIL VAPOR SAMPLES**
Hewlett-Packard Company, 3215 Porter Drive, Palo Alto, California
(ppm)

Boring Name:	SV-44B	SV-45A	SV-45B	SV-46	SV-47	SV-48	SV-49	SV-50	SV-51
Chemical name									
1,1,1-trichloroethane	12	7,400	8,040	5,500	7,500	1,700	0.6	1,600	8
1,2-dichloroethene, total	--	--	--	--	--	--	--	--	--
1,1-DCE/methylene chloride	688	1,367	1,784	3,340	4,008	113	42	790	350
tetrachloroethene	--	--	--	1	2	--	--	--	--
trichloroethene	1.2	26	28	47	59	2	0.4	3	0.6
Total VOCs	701	8,793	9,852	8,888	11,568	1,814	43	2,393	359

NOTES:

"VOC" Volatile Organic Compounds

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Total VOCs were calculated

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